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09/17/2008



BRIDGEWATER GROUP, INC.

4500 SW Kruse Way, Suite 110  
LAKE OSWEGO, OR 97035  
TEL: (503) 675-5252  
FAX: (503) 675-1960  
mrieke@bridgeh2o.com

April 8, 2003

Ms. Alicia Voss  
Oregon Department of Environmental Quality  
2020 SW Fourth Ave., Suite 400  
Portland, OR 97201-4987

Subject: Quarterly Status Report  
January through March 2003  
Burgard Industrial Park RI Project

This letter presents the quarterly status report for the period January through March 2003 for the Burgard Industrial Park RI/FS project in Portland, Oregon.

#### **Work Completed January through March 2003**

- Submitted *Phase II RI Work Plan* to DEQ on February 7, 2003.
- Received comments from DEQ regarding August 8, 2002, *Enhanced Best Management Plan*, December 20, 2002, *Groundwater Monitoring Plan*, and February 7, 2003, *Phase II RI Work Plan* in a letter dated February 25, 2003.
- Submitted *Revised Groundwater Monitoring Plan* to DEQ on March 17, 2003.
- Performed groundwater monitoring on March 23, 2003.
- Submitted *DEQ Information Request* to DEQ on March 25, 2003.

#### **Activities Planned April through June 2003**

- Repair and redevelop groundwater monitoring well MW-4.
- Perform Phase II RI soil and groundwater sampling on April 15, 2003.
- Review existing BMPs as part of the EBMP program.
- Submit results of groundwater monitoring to DEQ.
- Submit results of Phase II RI to DEQ.
- Prepare quarterly status report.

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Ms. Alicia Voss  
Page 2  
April 8, 2003

**Sampling, Test Results, and Other Data Generated January through March 2003**

Sampling, test results, and other data generated during January through March 2003 were or will be presented in data reports prepared for each sampling event.


**Problems Experienced January through March 2003**

No problems were encountered during January through March 2003.

Please call if you have any questions.

Sincerely,

**BRIDGEWATER GROUP, INC.**

A handwritten signature in black ink, appearing to read 'RD Rieke', with a stylized flourish at the end.

Ross D. Rieke, P.E.  
Vice President  
Environmental Consultant

cc: Mat Cusma/Schnitzer

SCHN00270576





BRIDGEWATER GROUP, INC.

## Revised Groundwater Monitoring Plan Burgard Industrial Park

202439/-  
2243910001  
Corresp.  
[SF File]

TO: Alicia Voss/DEQ  
COPY: Mat Cusma/Schnitzer  
FROM: Ross Rieke/Bridgewater Group  
DATE: March 17, 2003

This memorandum presents the revised groundwater monitoring plan for the Burgard Industrial Park in Portland, Oregon. This plan is revised from the December 20, 2002, plan based on comments received from the Oregon Department of Environmental Quality (DEQ) in a letter dated February 25, 2003.

Seven groundwater monitoring wells were installed for the Phase I Remedial Investigation (RI) at the site. Chemical analysis of groundwater samples collected in early 2002 noted concentrations of organic compounds less than surface water quality criteria and concentrations of metals similar to regional background levels. The results of the Phase I RI are presented in a May 16, 2002, *Phase I Remedial Investigation Report*. In a letter dated October 17, 2002 and during a meeting on November 14, 2002, DEQ requested that Schnitzer perform periodic groundwater monitoring to confirm the groundwater conditions noted in the Phase I RI sampling.

The purpose of the groundwater monitoring program is to assess:

- Any seasonal trends in the relative groundwater elevations at the site and;
- Confirm the lack of concentrations of hazardous substances at concentrations greater than surface water quality criteria or regional background concentrations in wells near the Willamette River.

Following from these stated goals, the groundwater monitoring program will consist of two elements:

- Groundwater elevation measurements
- Groundwater sampling and analysis

Each of these elements is discussed below.

### ***Groundwater Elevation Measurements***

Groundwater elevations will be determined in the seven groundwater monitoring wells installed for the Phase I RI to assess any seasonal trends in the relative groundwater elevations at the site. The depth to the groundwater in the wells will be measured using an electronic meter to a precision of 0.01 foot. The groundwater depth measurements will be performed in a shortest period as practicable to reduce the potential for rapidly changing river levels to affect the relative groundwater depths between wells measured at the start of



the sampling round and those measured at the end of the sampling round. The groundwater elevations will be determined based on the surveyed elevations of the wells as presented in the RI report. The Willamette River level in the Portland Harbor at the start and end of the sampling event will be noted from the US Army Corps of Engineers internet web site.

The groundwater elevations will be determined quarterly (every three months) starting in March 2003. This frequency will capture the typical wet weather/dry weather and high river/low river cycles.

### ***Groundwater Sampling and Analysis***

Groundwater samples will be collected from selected groundwater monitoring wells to confirm the lack of concentrations of hazardous substances at concentrations greater than surface water quality criteria or regional background concentrations in wells near the Willamette River. The specific wells that will be sampled and the analytes included in the laboratory analysis are based on the results of the RI groundwater sampling and analysis. Table 1 presents the wells to be sampled, the analysis to be performed, and the basis for their selection.



**TABLE 1**  
Groundwater Sampling and Analysis Program  
Burgard Industrial Park

Monitoring Well	Analytes	Basis - Phase I RI Results
MW-1	VOCs	VOC concentrations greater than surface water quality criteria.
	Total and Dissolved Sb, As, Ba, Cd, Cr, Cu, Pb, Hg, Ni, Zn	Total arsenic, chromium concentrations greater than water quality criteria in nearby wells.
MW-2	VOCs	In pathway from MW-1 to Willamette River. (No VOCs were detected at concentrations greater than surface water quality criteria in MW-2 during Phase I RI sampling.)
	Total and Dissolved Sb, As, Ba, Cd, Cr, Cu, Pb, Hg, Ni, Zn	Total arsenic, chromium concentrations greater than water quality criteria.
MW-3	Total and Dissolved Sb, As, Ba, Cd, Cr, Cu, Pb, Hg, Ni, Zn	Total arsenic, chromium concentrations greater than water quality criteria.
	SVOCs	As requested by DEQ, due to low concentration of 3-4, methylphenol.
MW-4	Total and Dissolved Sb, As, Ba, Cd, Cr, Cu, Pb, Hg, Ni, Zn	Total arsenic, chromium concentrations greater than water quality criteria.
MW-5	Total and Dissolved Sb, As, Ba, Cd, Cr, Cu, Pb, Hg, Ni, Zn	Total chromium concentrations greater than water quality criteria.
MW-7	VOCs	As requested by DEQ, due to low concentrations in Phase I sample and in samples from adjacent Northwest Pipe site.
	Total and Dissolved Sb, As, Ba, Cd, Cr, Cu, Pb, Hg, Ni, Zn	As requested by DEQ, due to total arsenic and chromium concentrations greater than water quality criteria.

The groundwater samples will be collected twice per year. Once during typical high groundwater/high river levels (March) and once during typical low groundwater/low river level (September or October). The groundwater samples will be collected using the same procedures and equipment, including field parameter measurements, used during the Phase I RI. The laboratory analysis methods will be the same as for the Phase I RI.

### ***Reporting and Assessment of Groundwater Monitoring Program***

A brief letter report will be prepared after each groundwater sampling round and results are received from the analytical laboratory (i.e. twice per year). Results from the two rounds of groundwater level measurements performed in the report period will be included in the report.



A report will be prepared after one year of groundwater monitoring presenting an assessment of the groundwater monitoring results and the appropriateness of additional groundwater monitoring. Results of the one year of groundwater monitoring will be assessed for the following:

- Groundwater flow directions and gradients consistent with the Phase I RI results.
- Contaminant concentrations in the two sampling rounds consistent with the concentrations measured in the Phase I RI.

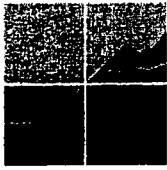
If these two conditions are demonstrated by the one year of groundwater monitoring, the groundwater monitoring will be discontinued.

### ***Schedule***

The first round of groundwater level measurements and groundwater sampling is scheduled for March 23, 2003.

Please call if you have any questions.





Floyd  
Snider  
McCarthy, Inc.

Strategy & Technical Solutions for Contaminated Properties

83 South King Street Suite 614 Seattle, Washington 98104 tel: 206.292.2078 fax: 206.682.7867

~~K. Audi~~  
2024391-  
2243910001  
Corresp.  
SF File

March 3, 2003

Alicia Voss  
Voluntary Cleanup Program  
Northwest Region  
2020 SW Fourth Ave. Suite 400  
Portland, OR 97204

**SUBJECT: SCHNITZER INTERNATIONAL TERMINAL: NOTICE OF FUTURE SEDIMENT  
SAMPLING, MARCH 11<sup>TH</sup> AND 12<sup>TH</sup> 2003**

Dear Ms. Voss:

Floyd Snider McCarthy (FSM) has been retained by Schnitzer Steel Inc., to perform sediment sampling in advance of future maintenance dredging at the International Terminal located in Portland. The purpose of this sampling event is to generate data that can be used to estimate the dredge sediment quality that would result from the proposed dredging of Berths 1 through 5 at International Terminal. Berths 1 through 3 are located within the International Terminal slip adjacent to the Burgard Yard; Berths 4 and 5 are located on the Willamette River side of the facility.

Data generated during this sampling event will be used to evaluate sediment quality consistent with the suggested analyte list found in the Dredged Material Evaluation Framework for the Lower Columbia River Management Area. It is anticipated that this data will be used during the drafting of a joint permit application for this berth maintenance dredging. The permit application is tentatively scheduled for submission to the U.S. Army Corps of Engineers in Spring 2003.

This sampling event is currently planned for March 11 and 12, 2003.

We would be happy to answer any questions you have related to this sampling. Please contact me at (206) 292-2078 or Jim Jakubiak at (503) 286-6976.

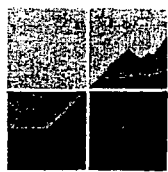
Sincerely yours,

Floyd Snider McCarthy, Inc.

Allison D. Geiselbrecht, Ph.D., Senior Scientist  
Copies: Jim Jakubiak, Teri A. Floyd

SCHN00270581





**Floyd  
Snider  
McCarthy, Inc.**  
Strategy & Technical Solutions for Contaminated Properties

83 South King Street Suite 614 Seattle, Washington 98104 tel: 206.292.2078 fax: 206.682.7867

*K. Nardi*  
2024391-  
2243910001  
Corresp.  
[SF File]

February 19, 2003

Mat Cusma  
Schnitzer Steel Industries  
PO Box 10047  
Portland, OR 97296-0047

**SUBJECT: INTERNATIONAL TERMINALS SLIP PROJECT  
INVOICE COVER LETTER  
PROJECT NUMBER: SSI-ITSEDS**

Dear Jim:

The attached invoice and budget summary is for work performed from January 1 through January 31, 2003. The following bullet items summarize activities undertaken during this period:

Task 1: IT Slip Strategy

- Presentation of strategies for conducting dredging within the International Terminals slip.
- Background document management.

Task 3: Identify the Issues Surrounding Sediment Rehandling Facilities

- Preparation and finalization of a presentation regarding a sediment re-handling facility at the Premier Oil site.

Task 5: Sampling and Analysis of IT Slip Sediments

- Development of an outline for the Sampling and Analysis Plan reflecting the strategy selected through Task 1.
- PAH screening method selection related to the Sampling and Analysis Plan.

Task 7: Draft formal Sampling and Analysis Plan for Joint Permit Application

- Preliminary SAP preparation consistent with the regional Dredged Material Evaluation Framework (DMEF) for future submittal.

Please let me know if you have any questions about the attached invoice.

SCHN00270587

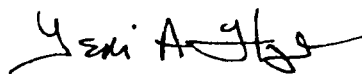


M. Cusma  
2/19/03

Floyd Snider McCarthy, Inc.

---

Sincerely yours,  
Floyd Snider McCarthy, Inc.



Teri Floyd  
Principal

Encl.: FSM Invoice  
Copies: Jim Dragna, Bingham McCutchen LLP



Schnitzer Steel IT Sediments  
Budget Summary by Task

STOEL-ITSEDS

Project/Task	Billed to Date(Current not included)				Current Invoice			Work In Progress			Total			BUDGET LEFT
	BUDGET	FSM	SUBS	TOTAL	FSM	SUBS	TOTAL	FSM	SUBS	TOTAL	FSM	SUBS	TOTAL	
BING-ITSEDS 01000 ID Decisions For Dredging	20,000	17,808	-	17,808	9,053	-	9,053	-	-	-	26,861	-	26,861	(6,861)
BING-ITSEDS 02000 SAP	15,000	-	-	-	-	-	-	-	-	-	-	-	-	15,000
BING-ITSEDS 03000 Sediment Rehandling Facility	8,000	2,616	-	2,616	1,876	-	1,876	-	-	-	4,493	-	4,493	3,508
BING-ITSEDS 04000 Trends Analyses - Rehandling Facility	5,000	-	-	-	-	-	-	-	-	-	-	-	-	5,000
BING-ITSEDS 05000 IT Terminals Slip Sediments SAP	62,500	-	-	-	6,091	-	6,091	-	-	-	6,091	-	6,091	56,409
BING-ITSEDS 06000 Assess Strategy Based/Analytical Results	11,000	-	-	-	-	-	-	-	-	-	-	-	-	11,000
BING-ITSEDS 05000 IT Terminals Slip Sediments SAP	22,500	-	-	-	925	-	925	-	-	-	925	-	925	21,575
BING-ITSEDS 08000 On Call Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTALS</b>	<b>144,000</b>	<b>20,424</b>	<b>-</b>	<b>20,424</b>	<b>17,944</b>	<b>-</b>	<b>17,944</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>38,369</b>	<b>-</b>	<b>38,369</b>	<b>105,631</b>

Current Month

Feb-03

SCHN00270589





83 South King Street Suite 614 Seattle, Washington 98104 tel: 206.292.2078 fax: 206.682.7867

Schnitzer Steel Industries, Inc.  
Attention: Mat Cusma  
P.O. Box 10047  
Portland, OR 97296-0047

February 18, 2003  
Project No: SSI-ITSEDS  
Invoice No: 0001056

Floyd Snider McCarthy, Inc. Federal Tax I.D. No. (b) (4)

FSM Project No: SSI-ITSEDS

Professional Services: January 1, 2003 through January 31, 2003

Task: 01000 IT Slip Strategy

Professional Personnel

Hours Rate Amount

(b)(4) 1-95

Task: 03000 Sediments Rehandling Facility Issues

Professional Personnel

(b)(4) 1-95


SCHN00270590



**Task: 05000 IT Terminals Slip Sediments SAP**


**Professional Personnel**

(b)(4) 1-95




**Task: 07000 Draft Formal SAP For Joint Permit App.**

(b)(4) 1-95



(b)(4) 1-95



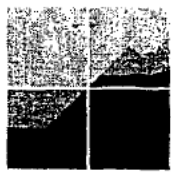
**Totals**

**17,944.33**

**20,424.40**

**38,368.73**





**Floyd  
Snider  
McCarthy, Inc.**  
Strategy & Technical Solutions for Contaminated Properties

83 South King Street Suite 614 Seattle, Washington 98104 tel: 206.292.2078 fax: 206.682.7867

Schnitzer Steel Industries, Inc.  
Attention: Mat Cusma  
P.O. Box 10047  
Portland, OR 97296-0047

February 18, 2003  
Project No: SSI-ITSEDS  
Invoice No: 0001056

Floyd Snider McCarthy, Inc. Federal Tax I.D. No. (b) (4)


**FSM Project No: SSI-ITSEDS**

**Professional Services: January 1, 2003 through January 31, 2003**

**Task: 01000 IT Slip Strategy**


**Professional Personnel**

(b)(4) 1-95



**Task: 03000 Sediments Rehandling Facility Issues**

(b)(4) 1-95




SCHN00270592



Task: 05000 IT Terminals Slip Sediments SAP


Professional Personnel

(b)(4) 1-95




Task: 07000 Draft Formal SAP For Joint Permit App.

(b)(4) 1-95



(b)(4) 1-95



Totals

17,944.33

20,424.40

38,368.73

SCHN00270593



**Billing Backup**

Tuesday, February 18, 2003

Floyd Snider McCarthy, Inc.

Invoice Dated February 18, 2003

1:10:37 PM

SSI-ITSEDS Schnitzer Steel IT Sediments

Invoice No: 0001056

Task: 01000 IT Slip Strategy

**Professional Personnel**

Name

Hours

Rate

Amount

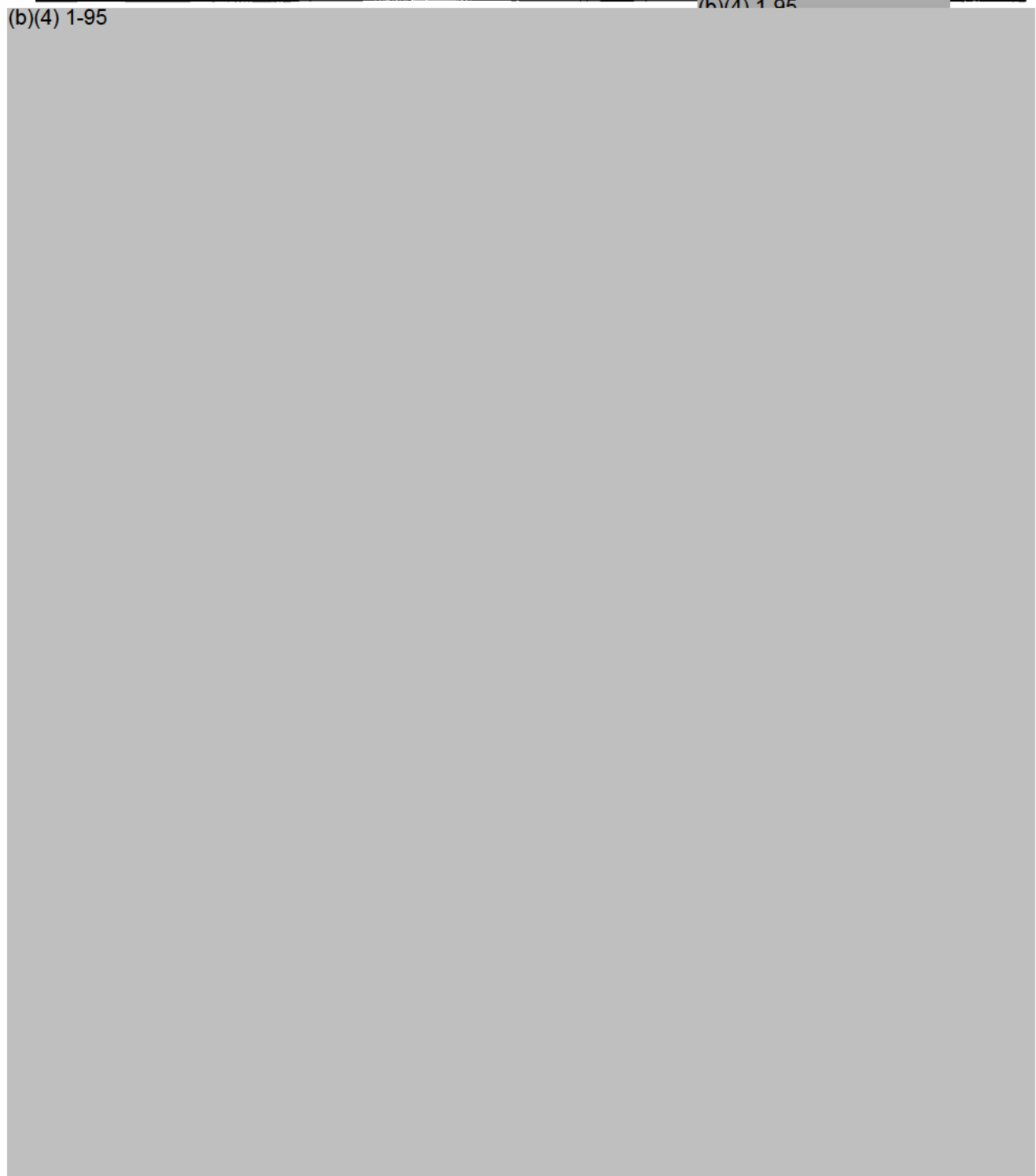
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(b)(4) 1-95

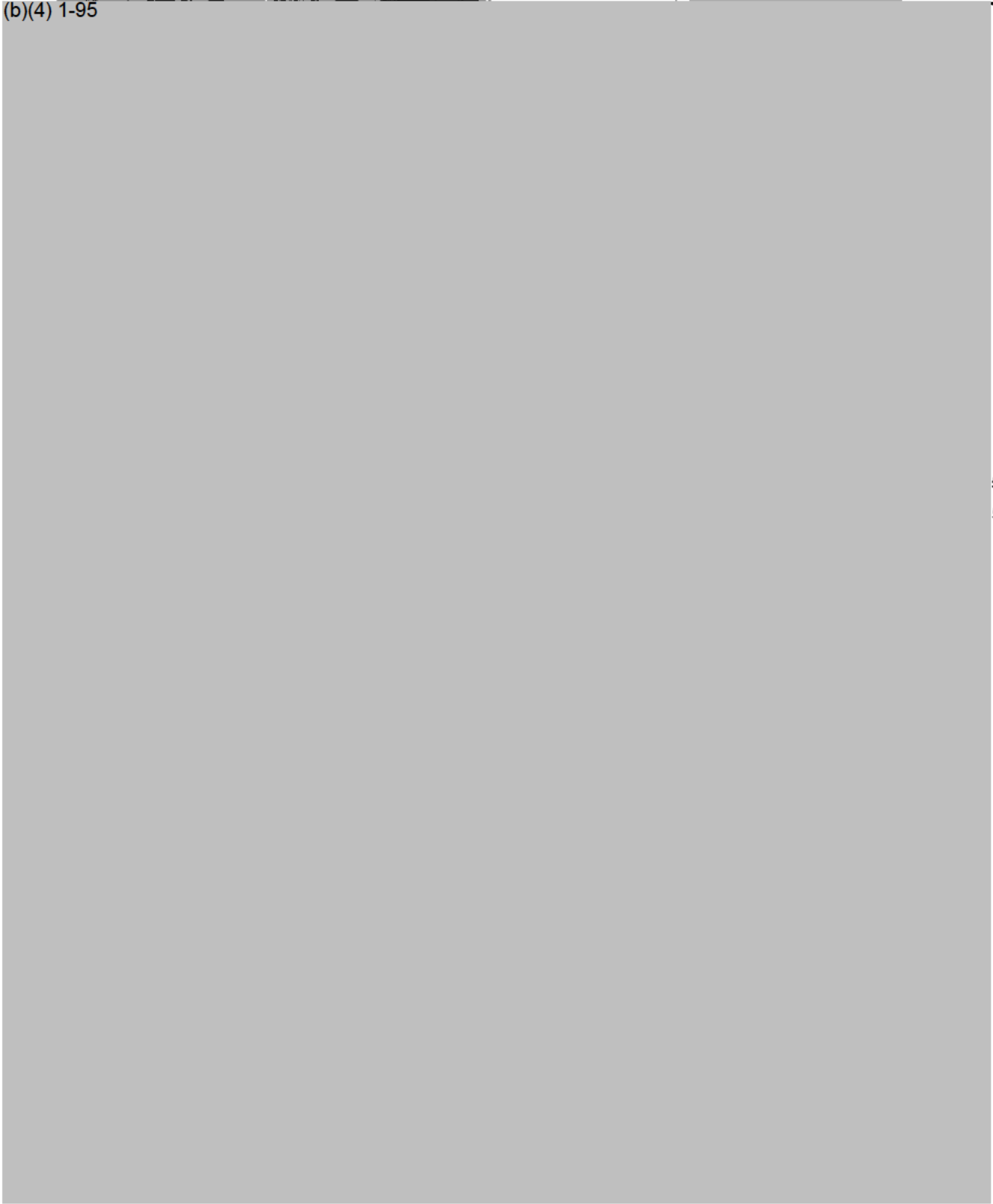
(b)(4) 1-95



Name	Hours	Rate	Amount
Principal			



(b)(4) 1-95



5

5



(b) (4)

(b)(4) 1-95




Task: 07000 Draft Formal SAP For Joint Permit App.

**Professional Personnel**

Name	Hours	Rate	Amount
------	-------	------	--------



(b)(4) 1-95



Total this report \$17,944.33





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10  
1200 Sixth Avenue  
Seattle, Washington 98101

DEC 08 2000

Reply To  
ATTN Of ORC-158

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Anton U. Pardini  
3200 NW Yeon Avenue  
Portland, OR 97210

Re: Notice of Potential Liability for the Schnitzer Investment Corporation - Kitttridge facility located at 9040, 9945, 10400, 12005 N. Burgard Way  
Portland Harbor Superfund Site, Portland, Oregon

Dear Mr. Pardini:

This letter is to notify you of potential liability, as defined by Section 107(a) of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9607(a), as amended (CERCLA), with respect to the above-referenced Site. Substantially the same letter has been sent to 69 parties, and additional general notice letters may be sent to others. You may receive or have already received notification of potential liability for the Site from the State of Oregon Department of Environmental Quality (DEQ).

NOTICE OF POTENTIAL LIABILITY

The United States Environmental Protection Agency (EPA) in cooperation with DEQ has documented the release or threatened release of hazardous substances, pollutants or contaminants at the Site. EPA and DEQ have spent public funds on actions to investigate and control such releases or threatened releases at the Site.

Under Sections 106(a) and 107(a) of CERCLA, 42 U.S.C. §§ 9606(a) and 9607(a), Section 7003 of the Resource Conservation and Recovery Act, 42 U.S.C. § 6973, as amended (RCRA), and other federal and state laws, a Potentially Responsible Party (PRP) or parties may be ordered to perform response actions deemed necessary by EPA and/or DEQ to protect the public health, welfare, or the environment, and may be liable for all costs incurred by each government in responding to any release or threatened release at the Site. In addition, PRPs may be required to pay for damages to, destruction of, or loss of natural resources, including the costs of assessing such damages.

RECEIVED

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EPA, in cooperation with DEQ, has evaluated information in connection with the investigation of the Site. Based on this information, EPA believes Schnitzer Investment Corporation - Kittridge may be a PRP with respect to this Site. PRPs under CERCLA include current owners and operators of any portion of the Site, prior owners and operators at the time of a release, as well as persons who arranged for disposal or treatment of hazardous substances sent to the Site, or persons who accepted hazardous substances for transport to the Site.

In accordance with CERCLA and other authorities, EPA has already undertaken certain actions and incurred certain costs in response to conditions at the Site. These response actions include the performance of assessments and other activities necessary to include the Site on the CERCLA National Priorities List (NPL) of hazardous waste sites, development of a partnership with DEQ for the investigation and cleanup of the Site, and consultation with federal, state and tribal CERCLA Natural Resource Trustees.

In accordance with EPA and DEQ joint management plans for the Site, EPA will be the lead agency, as defined in CERCLA's implementing regulations, also known as the National Contingency Plan (NCP), for in-water contamination at the Site. DEQ will be the lead agency for upland contamination, although the agencies intend to coordinate all their efforts and may share tasks as they deem appropriate. EPA accordingly anticipates expending additional funds for response activities at the Site.

#### PRP RESPONSE AND EPA CONTACT PERSON

The next major step EPA anticipates taking is the negotiation of an Administrative Order on Consent with willing PRPs for the performance a Remedial Investigation/Feasibility Study (RI/FS) to determine the nature and extent of in-water contamination at the Site, and to analyze remedial alternatives. EPA may send special notice letters, in accordance with Section 122(e) of CERCLA, 42 U.S.C. § 9622(e), which will provide more information about the Site, and set forth a specific schedule for RI/FS negotiations, or EPA may commence negotiations without special notice at the request of voluntary parties able to demonstrate their capacity to adequately fund and perform the RI/FS. You are encouraged to contact EPA by December 28, 2000, to indicate whether you are interested at this time in volunteering to enter negotiations to perform the RI/FS and to reimburse response costs incurred by EPA and to be incurred by EPA at the Site. EPA expressly reserves the right to issue special notice regardless of how many volunteers respond affirmatively to general notice letters.

Any written response to this letter should be sent to:

U.S. Environmental Protection Agency  
Elizabeth McKenna, Attorney  
Office of Regional Counsel  
1200 Sixth Avenue, M/S ORC 158  
Seattle, Washington 98101

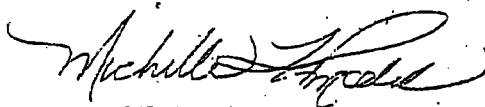
SCHN00270618



This letter is intended solely for notification and information purposes. Nothing in this letter can be relied upon as a final EPA position on any matter.

Inquiries by counsel or inquiries of a legal nature should be directed to Elizabeth McKenna, 206-553-0016, or Charles Ordine, 206-553-1504, Office of Regional Counsel. Technical, scope, budget, and other questions for EPA regarding this letter or the Site should be directed to Wallace Reid, 206-553-1728, or Chip Humphrey, 503-326-2678.

Sincerely,



Michael F. Gearheard  
Director, Office of Environmental Cleanup

Enclosure: Recipient List

cc: Mike Rosen, DEQ  
Tom Zelenka, P.O. Box 10047, Portland, OR 97296-0047



# Portland Harbor Initial General Notice List

December 5, 2000

	Company Name	Contact	Contact Address			
1	ACF Industries	Richard Hyluk	620 North Second Street	St. Charles	MO	57883
2	Alder Creek Lumber Company	Ronald Prestwood	P.O. Box 83237	Portland	OR	97046
3	ARCO	Ralph Moran	4 Center Point Drive, Suite 179	La Palma	CA	90623
4	Atofina Chemicals		6400 NW Front	Portland	OR	95778
5	Babcock Land Company	George Webb	9933 NW 107th Avenue	Portland	OR	97231-
6	BNRR	Matthew Rose	2650 Lou Menk Dr.	Ft. Worth	TX	76131
7	Brix Maritime		9030 NW St. Helens	Portland	OR	97231
8	Callag Metals	Warren Rosenfeld, Pres.	2495 NW Nicolai St	Portland	OR	95398
9	Cascade General Inc.	Alan Sprott	5555 N. Channel	Portland	OR	972-
10	Christenson Oil		3747 N Suttle Rd	Portland	OR	9721,
11	City of Portland Outfalls	Al Smith	1211 SW 5th Ave., Room 800	Portland	OR	97204-
12	City of Portland Water Laboratory	Al Smith	1211 SW 5th Ave., Room 800	Portland	OR	97204-
13	Crawford Street Corp.	Robert Phillip	3200 NW Yeon Street	Portland	OR	97210-
14	Elf Atochem	Larry Patterson	6400 NW Front Ave	Portland	OR	85778
15	Equilon Enterprises LLC	Anthony Palngyi	10602 NE 38th Place	Kirkland	WA	98109
16	Foss Maritime	Larry Johnson	9030 NW St. Helens Road	Portland	OR	97231-
17	Fred Devine Diving and Salvage	J. (Mick) Leitz	6211 N. Ensign Street	Portland	OR	97217-
18	Freightliner Corporation	Milan Synak	4747 N. Channel Avenue	Portland	OR	97217-
19	Front Avenue LLP	Jay Zideh	3121 SW Moody Avenue	Portland	OR	97201-
20	GASCO (NW Natural)	Sandra Hart	220 NW 2nd Ave.	Portland	OR	97209
21	GATX Linton Terminal	Eric Conard	1363 North Gaffey Street	San Pedro	CA	89408
22	Georgin Pacific - Linton	Steve Petrin	900 SW Fifth Avenue	Portland	OR	95949
23	Goldendale Aluminum	Brett Wilcox	101 SW Main St #905	Portland	OR	97204
24	Gould Electronics, Inc. aka GA-TEK Inc.	James Cronmiller	35129 Curjis Blvd.	Eastlake	OH	89408
25	Great Western Chemical Co.	Robert H. McCall	808 S.W. 15th Avenue	Portland	OR	95298
26	GS Roofing Products (Genstar)		6350 NW Front Ave	Portland	OR	9721
27	Gunderson	Robert A. Bridgers	4350 NW Front Ave	Portland	OR	97210
28	Hendren Tow Boat Co.	Floyd G. Hendren	12751 NW Springville Rd	Portland	OR	97229
29	Jefferson Smurfit	Heidi Reed	P.O. Box 86959	Portland	OR	97283-
30	Koppers Industries, Inc.	Amos S. Kamrer	7540 NW St. Helens Road	Portland	OR	97210
31	Lakeside Industries	Charles Gaskill	4850 NW Front Avenue	Portland	OR	95954
32	Linton Oil Fire Training Grounds	Al Smith, City of Port.	1211 SW 5th Ave. Rm #1100	Portland	OR	97204
33	Linton Plywood Association	Jim Stahley	10504 NW St. Helens Road	Portland	OR	97231-
34	Mar Com Marine	Tom Maples	9070 North Bradford St.	Portland	OR	97203-
35	Marine Finance Corporation	Steve Andrews	8444 NW St. Helens Road	Portland	OR	97231-
36	Marine Salvage Consortium Inc		6211 N Ensign	Portland	OR	97217
37	McCall Oil and Great Western Chemical	Lee Zimmerli	808 SW 15th Avenue	Portland	OR	97205-
38	McCormick & Baxter		PO Box 3344	Portland	OR	97208
39	Mobil Oil aka Socony Mobil Company Inc.	C.A. Fouchie	2063 Main Street PMB 501	Oakland	CA	94561

SCHN00270620



# Portland Harbor Initial General Notice List

December 5, 2000

40	Morse Brothers		12222 NW Marina	Portland	OR	97231
41	Northwest Pipe Company	Carol Grant	P.O. Box 83149	Portland	OR	97134
42	NW Natural	C J Rue	220 NW Second	Portland	OR	97209
43	Olympic Pipeline Co.	W.N. Harris	5005 Business Park North	Bakersfield	CA	93309
44	Oregon Steel Mills	Drew Gilpin	P.O. Box 2760	Portland	OR	97208
45	Owens Corning Fiberglas	Thomas Brungard	Owens Corning Parkway	Toledo	OH	43659
46	Port of Portland Facilities	Tom Bispham	Environmental Services Division P.O. Box 3529	Portland	OR	97208
47	Portland General Electric Harborton Substation	Dennis Norton	121 SW Salmon Street	Portland	OR	97204
48	Rhone Poulenc	Robert L. Ferguson	P.O. Box 12014	Research Triangle Park	NC	22709
49	Riedel (Zidell-Triangle Park)	Steve Shain	3121 SW Moody Ave.	Portland	OR	97201
50	RK Storage	Roger Croft	10937 NW Front Avenue	Portland	OR	97231
51	RoMar Realty of Oregon, Inc.	Donna Murden	3500 S. Kedzie	Chicago	IL	60532
52	Schnitzer Investment Corporation - Kittridge	Tom Zelenka	P.O. Box 10047	Portland	OR	97249
53	Shaver Transportation	Rob Rich	P.O. Box 10324	Portland	OR	96972
54	Terminal 4-Port of Portland	J.W. Ring	700 NW Multnomah	Portland	OR	97217
55	Texaco Unloading Dock (Includes Pipeline and Terminal)	Anthony Palagy, Equilon	10602 NE 38th Place	Kirkland	WA	98109
56	Time Oil	Kevin Murphy	2737 W. Commodore Way	Seattle	WA	98199
57	Time Oil St. Helens Road	Scott Sloan	P.O. Box 24447	Seattle	WA	97677
58	Triangle Park LLC	Jay Zidell	3121 SW Moody Ave	Portland	OR	97201
59	Tube Forgings USA		5200 NW Front	Portland	OR	97210
60	UPRR-Albina Yard, Willamette Blvd & Basin Ave	Bob Markworth	1416 Dodge Street	Omaha	NB	68179
61	US Coast Guard	Roy Clark	2000 Embarcadero, Suite 200	Oakland	CA	89269
62	US Moorings (USCOE)	Carolyn Markos	8010 NW St Helens Road	Portland	OR	97210
63	Wacker Siltronic	Katherine Young	P.O. Box 83180	Portland	OR	97083
64	Willamette Cove (METRO)	Mike Burton	600 NW Grand Ave.	Portland	OR	97232
65	Willbridge (Chevron)	Gerald O'Regan	6001 Bollinger Canyon Rd.	San Ramon	CA	89579
66	Willbridge (GATX)	Eric Conrad	1363 N. Gaffey Road	San Pedro	CA	90731
67	Willbridge (Shell)	Frank Fossati	P.O. Box 219	Lake Forest	CA	92630
68	Willbridge (Tosco)	Martin Cramer	5528 NW Doane Ave.	Portland	OR	97210
69	Willbridge (Unocal)	Ron Schwab	376 S. Valencia Avenue	Brea	CA	92823

SCHN00270621



# BINGHAM

LEGAL INSIGHT. BUSINESS INSTINCT.

Kavita Patel  
Phone: 213.680.6671  
Fax: 213.680.6499  
kavita.patel@bingham.com

July 2, 2007

**Via E-Mail and U.S. MAIL**

Margie Schroeder  
Black Helterline LLP  
1900 Fox Tower  
805 SW Broadway  
Portland, Oregon 97205-3359

**Re: NW Pipe Company Site Request for Access to Schnitzer Property**

Dear Margie:

I write to follow up on my voice-mail message of Friday, June 29th regarding NW Pipe Company's request for access to Schnitzer's property at 12005 N. Burgard Road in Portland, Oregon (the "Property").

I understand from our discussions that NW Pipe Company hopes to collect certain samples in the slip at the Property during the month of August. This work will be performed by CH2M Hill and may include sampling for PAHs and zinc.

Schnitzer is willing to discuss site access with NW Pipe Company to facilitate required sampling. Before agreeing to any terms of access, however, Schnitzer needs additional information regarding the nature and purpose of the sampling, including the precise locations, duration and scope of any sampling as well as the types of equipment to be used and tests to be conducted.

Schnitzer therefore proposes a meeting of NW Pipe Company's consultants and Schnitzer's staff and consultants to discuss the proposed sampling. Schnitzer proposes that the meeting take place at 10:00 a.m. next Monday, July 9, 2007 at Schnitzer's offices at 3200 N.W. Yeon Avenue in Portland. Please let me know as soon as possible if this time will work for NW Pipe Company.

To ensure that the meeting is as productive as possible, we ask that NW Pipe Company provide copies of relevant documents prior to the meeting, including any work descriptions and communications with the Oregon Department of Environmental Quality or other regulators regarding this sampling. If NW Pipe Company is available to meet next Monday, we ask that you please provide the documents by this Thursday, July 5th.

Boston  
Hartford  
Hong Kong  
London  
Los Angeles  
New York  
Orange County  
San Francisco  
Santa Monica  
Silicon Valley  
Tokyo  
Walnut Creek  
Washington

Bingham McCutchen LLP  
Suite 4400  
355 South Grand Avenue  
Los Angeles, CA  
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T 213.680.6400  
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bingham.com

A/72078970.2

SCHN00270665



Margie Schroeder  
July 2, 2007  
Page 2

In the meantime, please feel free to contact me if you wish to discuss this matter further.

Sincerely yours,

*Kavita Patel*

Kavita Patel

cc: Greg Christianson



Margie Schroeder  
July 2, 2007  
Page 3

bcc: Tom Zelenka



**Oregon Department of Environmental Quality**  
**A CHANCE TO COMMENT ON....**

Proposed Interim Cleanup Action at the Gunderson, Inc. facility.

**Notice Date:** April 1, 2003

**Comments Due:** May 1, 2003

**Project Location:** The Gunderson, Inc. facility is located at 4350 N.W. Front Avenue in Portland.

**Proposal:** DEQ and Gunderson, Inc. are proposing to implement interim source control measures at the Gunderson, Inc. facility to limit the migration of groundwater contaminated with the solvent 1,1,1-trichloroethane (TCA) to the Willamette River and to remove TCA from soil and groundwater in the source area where the originating spill occurred.

DEQ seeks public comment on the proposed interim source control measures and proposed discharge limits and monitoring requirements for discharge of treated groundwater under the permit exemption provision of ORS 465.315(3).

**Highlights:** Gunderson and DEQ entered into a Voluntary Cleanup Agreement (Agreement) in 1994 to complete a Remedial Investigation and Feasibility Study (RI/FS) of the northern third of the site. The Agreement was amended in 2000 to expand the scope of work to include the entire facility and requires Gunderson to evaluate, develop and implement source control measures for unpermitted discharge or migration of contaminants to the Willamette River.

The RI determined the nature and extent of a TCA groundwater plume originating from an above-ground dip tank previously used to degrease rail car axles. The plume extends beyond the Gunderson site beneath the Lakeside Industries site. Combined levels of TCA and associated chemicals in monitoring wells near the river bank exceed DEQ screening level values for ecological receptors in surface water and ambient water quality criteria.

Gunderson conducted an evaluation of possible source control technologies. The evaluation recommended two interim cleanup actions.



1. Limit the migration of the TCA-contaminated groundwater toward the Willamette River by extracting the groundwater at the property boundary.
2. Decrease the amount of TCA in the spill area via an air sparging and soil vapor extraction system.

Gunderson subsequently conducted a series of pilot tests for the interim action to evaluate the potential effectiveness of the proposed source control measures.

**How to Comment:** The DEQ staff memorandum and supporting documents recommending the proposed interim source control actions and the proposed associated discharge and monitoring requirements for treated groundwater may be reviewed, by appointment, at DEQ's Northwest Region office, 2020 SW Fourth Ave., Suite 400, Portland, OR 97201. To schedule an appointment, call Gerald Gamolo at (503) 229-6729.

Send written comments by May 1, 2003 to Matt McClincy, DEQ's Project manager, at the address above or by e-mail to [mcclincy.matt@deq.state.or.us](mailto:mcclincy.matt@deq.state.or.us). Direct questions to Mr. McClincy at (503) 229-5538.

Upon written request by ten or more persons, or by a group having ten or more members, DEQ will hold a public meeting to receive oral comments.

**The Next Steps:** DEQ will consider all comments received. DEQ will then decide whether or not to amend the proposed interim source control actions or approve them. DEQ intends to approve the proposed interim actions if no adverse comments are received. A final site cleanup decision will be made after completion of the site investigation, risk assessment and evaluation of final cleanup methods.



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ATTORNEYS

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TDD (503) 221-1045  
Internet: www.stoel.com

December 28, 1999

JOAN P. SNYDER  
Direct Dial  
(503) 294-9657  
email jpsnyder@stoel.com

Mr. Rob Boydston  
Boydston Metal Works  
9002 North Sever Court  
Portland OR 97203

**Re: DEQ Investigation Demand**

Dear Mr. Boydston:

As you know, I am counsel for Schnitzer Investment Corp. ("Schnitzer"). We met at the meeting called by Linda Wakefield on December 6. I am writing to follow up on the summary we provided at the December 6 meeting regarding the demand that has been made upon Schnitzer with respect to the property that Boydston Metal Works leases from Schnitzer. For your information, I am enclosing a copy of the sign-in sheet of those in attendance at the December 6 meeting.

We provided to you at the meeting a copy of the November 24, 1999 letter from the Oregon Department of Environmental Quality ("DEQ") demanding that Schnitzer perform an environmental remedial investigation of the property located at 12005 N. Burgard Road. DEQ's demand specifically requires that the property that you lease from Schnitzer be included in the investigation. DEQ is requiring Schnitzer to investigate whether there have been any releases or threatened releases of hazardous substances from your property that pose a threat to human health or the environment. In particular, DEQ has expressed concerns that the N. Burgard industrial park may be a source of the following substances, which have been detected in sediments in the Willamette River:

antimony	copper	nickel
arsenic	lead	zinc
barium	chromium	silver
cadmium	iron	total organotins
cobalt	manganese	

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Mr. Rob Boydstun  
December 28, 1999  
Page 2

butylbenzylphthalate  
carbazole  
dibenzofuran

2-methyl-naphthylene  
Total organic Carbon

Total low- and high-  
molecular weight  
polynuclear aromatic  
hydrocarbons (LPAHs  
and HPAHs,  
respectively)

For your information, LPAHs and HPAHs are constituents of petroleum-based materials, including oils, lubricants and greases.

Although a portion of DEQ's demand relates to historical uses of the property that may precede your tenancy, other portions of DEQ's demand relate specifically to your current operations. In particular, it requires that Schnitzer characterize "all release mechanisms" from tenant properties to the Willamette River, including overland discharges, storm water runoff, direct releases and groundwater seepage. It also requires development of "source control measures" to be implemented on the property you lease.

All of DEQ's demands to investigate and monitor the current operations and practices on your facility are demands that arise directly out of your tenancy. They are therefore subject to the indemnity that you provided to Schnitzer in your lease, and Schnitzer will look to you to reimburse it for any costs that it incurs performing this work. In addition, Schnitzer will hold you liable under Oregon Revised Statute 465.255 to the extent any costs it incurs arise out of releases or threats of the release of hazardous substances during your tenancy.

Since our meeting, Schnitzer has communicated to DEQ notice of its intent to conduct the remedial investigation itself, rather than allow DEQ to come onto the property and conduct the investigation through DEQ contractors. I have enclosed a copy of the notice Schnitzer provided to DEQ. Schnitzer's notice advises DEQ that its investigation of tenant-controlled premises will be dependent upon your cooperation. I have orally advised DEQ that, based on our meeting, we are assuming such cooperation will exist.

DEQ's November 24 demand letter states that it will be providing Schnitzer with a proposed voluntary cleanup agreement and a scope of work tailored to deal with the issues identified at the International Terminal industrial area. Schnitzer has not yet received that from DEQ, but we do know that the proposed scope of work and agreement will resemble the generic forms that were provided with DEQ's November 24 letter. Schnitzer expects that it will negotiate with DEQ over the extent of the work to be performed, with the expectation that it will only do the work that DEQ has authority to require and that it will focus on the issues raised by DEQ in the Strategy Recommendations memorandum included with DEQ's November 24 letter.



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Mr. Rob Boydstun  
December 28, 1999  
Page 3

We know that the required work, as it relates to your tenancy, will have two aspects. The first aspect will look specifically at the property that you lease to determine if there have been any releases of hazardous substances or whether, based on your operations, there are any potentials for the release of hazardous substances. As we discussed at the meeting, this will include a "Phase I" type of environmental assessment of your current operations. To the extent any such work has already been performed and you have a report you can provide, that will reduce the remaining work to be done. Depending on what that assessment reveals, and depending on what DEQ's specific scope of work requires, more work (including sampling, analysis and more report writing) may or may not be required with respect to your operations.

The second aspect of the required work will be exploring the potential for any contamination from your property to reach the river or any other receptor of concern to DEQ (looking at potential "pathways"). If the first aspect of the work has revealed no source of contamination on your property, this will not be something you need to address. If there have been releases or if your operations create the potential for releases, DEQ will require an assessment of surface water, groundwater and storm sewers pathways to determine whether those substances are getting to the river or otherwise creating a risk to human health or the environment.

As we explained at the meeting, Schnitzer expects you to bear the cost of complying with those portions of the DEQ demand that arise out of your tenancy. There are two ways that the required work can be accomplished. You can cooperate with Schnitzer and the environmental consultant it has hired, Bridgewater Group, to perform that portion of the required investigation that relates to your property and your operations. Alternatively, you can hire a consultant on your own to complete the portion of the work relating to your property and your operations. If you work with Schnitzer's consultant, Schnitzer will charge back to you only that portion of its costs that arise out of your tenancy. That is, to the extent the consultant is assessing your operations on the property you lease, you will have to pay for that. To the extent the consultant is assessing issues that arise out of operations on that property prior to your tenancy, Schnitzer will not charge you for that. Further (and this is true whether or not you use your own consultant), Schnitzer is going to have to do work that is focused on the second aspect of the investigation discussed above—looking at the potential "pathways" for contamination from all properties to the river. If it turns out that there is contamination on your property from your tenancy that requires this analysis to be performed, then Schnitzer will ask you to pay for your fair share of that work. Schnitzer does not believe that this is work that can be done partially by one consultant and partially by another, so Schnitzer intends to proceed to perform that work as cost effectively as possible and will then discuss with you what portion of the costs represent your fair share.



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Mr. Rob Boydston  
December 28, 1999  
Page 4

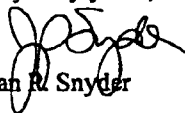
At this point in time, there are three things you need to do. First, if you have insurance that may provide coverage, you should provide notice of this claim and DEQ's November 24 demand to those insurers. Second, you need to provide to Linda Wakefield at Schnitzer any of the following kinds of reports regarding your operations and/or the property you lease:

- Any environmental assessments, including "Phase I" or other property assessments
- Any Spill Prevention and Contingency Plans for your facility
- Any Oregon State Fire Marshal Hazardous Substance reports filed for the years you operated on this property
- Any information on underground storage tanks (USTs), including DEQ UST registrations, decommissioning notices or reports
- A list of chemicals used on your facility (OSHA requires that you have a list of all chemicals to which your employees are exposed; if you have an MSDS binder, it is usually the table of contents for that binder)
- Any stormwater plans
- Any documentation of wastes (hazardous or non-hazardous) shipped offsite including Hazardous Waste annual reports or, if you are not required to file annual reports, manifests for shipments sent offsite

Third, you need to let Linda Wakefield at Schnitzer (323-2732) know whether you intend to have Schnitzer's consultant, Bridgewater Group, perform the first "assessment" phase of the investigation on your operations. As Ross Rieke of Bridgewater explained at the December 6 meeting, he anticipates that the initial assessment of your property would cost less than \$5000.

We will let you know as soon as DEQ has provided its proposed scope of work for the investigation. If you have any questions in the meantime, please call me (294-9657) or Linda Wakefield.

Very truly yours,

  
Joan R. Snyder

cc: Linda Wakefield  
Tom Zelenka  
Jim Jakubiak



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Mr. Rob Boydston  
December 28, 1999  
Page 5

bc: Ross Rieke  
Matt Cusma



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Internet: www.stoel.com

December 29, 1999

JOAN P. SNYDER  
Direct Dial  
(503) 294-9657  
email jpsnyder@stoel.com

Mr. Tim Mihalek  
Morgan CFS  
9945 North Burgard Road  
Portland, OR 97203

**Re: DEQ Investigation Demand**

Dear Mr. Mihalek:

I am counsel for Schnitzer Investment Corp. ("Schnitzer"). Linda Wakefield at Schnitzer has given me your name. I am writing to alert you to a demand that the Oregon Department of Environmental Quality ("DEQ") has made upon Schnitzer that relates to the property that Morgan CFS leases from Schnitzer.

At tab A of the enclosed materials is a copy of a November 24, 1999 letter from DEQ demanding that Schnitzer perform an environmental remedial investigation of the property located at 12005 N. Burgard Road. DEQ's demand specifically requires that the property that you lease from Schnitzer be included in the investigation. DEQ is requiring Schnitzer to investigate whether there have been any releases or threatened releases of hazardous substances from your property that pose a threat to human health or the environment. In particular, DEQ has expressed concerns that the N. Burgard industrial park may be a source of the following substances, which have been detected in sediments in the Willamette River:

antimony	nickel	Total low- and high-
arsenic	zinc	molecular weight
barium	silver	polynuclear aromatic
cadmium	total organotins	hydrocarbons (LPAHs
cobalt	butylbenzylphthalate	and HPAHs,
copper	carbazole	respectively)
lead	dibenzofuran	
chromium	2-methyl-naphthylene	
iron	Total organic Carbon	
manganese		

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Mr. Tim Mihalek  
December 29, 1999  
Page 2

For your information, LPAHs and HPAHs are constituents of petroleum-based materials, including oils, lubricants and greases.

Although a portion of DEQ's demand relates to historical uses of the property that may precede your tenancy, other portions of DEQ's demand relate specifically to your current operations. In particular, it requires that Schnitzer characterize "all release mechanisms" from tenant properties to the Willamette River, including overland discharges, storm water runoff, direct releases and groundwater seepage. It also requires development of "source control measures" to be implemented on the property you lease.

All of DEQ's demands to investigate and monitor the current operations and practices on your facility are demands that arise directly out of your tenancy. They are therefore subject to the indemnity that you provided to Schnitzer in your lease (see tab C of the enclosed materials), and Schnitzer will look to you to reimburse it for any costs that it incurs performing this work. In addition, Schnitzer will hold you liable under Oregon Revised Statute 465.255 to the extent any costs it incurs arise out of releases or threats of the release of hazardous substances during your tenancy.

In response to DEQ's November 24 letter, Schnitzer has communicated to DEQ notice of its intent to conduct the remedial investigation itself, rather than allow DEQ to come onto the property and conduct the investigation through DEQ contractors. I have enclosed a copy of the notice Schnitzer provided to DEQ. Schnitzer's notice advises DEQ that its investigation of tenant-controlled premises will be dependent upon your cooperation.

DEQ's November 24 demand letter states that it will be providing Schnitzer with a proposed voluntary cleanup agreement and a scope of work tailored to deal with the issues identified at the International Terminal industrial area. Schnitzer has not yet received that from DEQ, but we do know that the proposed scope of work and agreement will resemble the generic forms that were provided with DEQ's November 24 letter. Schnitzer expects that it will negotiate with DEQ over the extent of the work to be performed, with the expectation that it will only do the work that DEQ has authority to require and that it will focus on the issues raised by DEQ in the Strategy Recommendations memorandum included with DEQ's November 24 letter.

We know that the required work, as it relates to your tenancy, will have two aspects. The first aspect will look specifically at the property that you lease to determine if there have been any releases of hazardous substances or whether, based on your operations, there are any potentials for the release of hazardous substances. This will include a "Phase I" type of environmental assessment of your current operations. To the extent any such work has already been performed and you have a report you can provide, that will reduce the remaining work to be done. Depending on what that assessment reveals, and depending on what DEQ's specific scope



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Mr. Tim Mihalek  
December 29, 1999  
Page 3

of work requires, more work (including sampling, analysis and more report writing) may or may not be required with respect to your operations.

The second aspect of the required work will be exploring the potential for any contamination from your property to reach the river or any other receptor of concern to DEQ (looking at potential "pathways"). If the first aspect of the work has revealed no source of contamination on your property, this will not be something you need to address. If there have been releases or if your operations create the potential for releases, DEQ will require an assessment of surface water, groundwater and storm sewers pathways to determine whether those substances are getting to the river or otherwise creating a risk to human health or the environment.

Schnitzer expects you to bear the cost of complying with those portions of the DEQ demand that arise out of your tenancy. There are two ways that the required work can be accomplished. You can cooperate with Schnitzer and the environmental consultant it has hired, Bridgewater Group, to perform that portion of the required investigation that relates to your property and your operations. Schnitzer believes that will be the most cost effective way for you to manage this. Alternatively, you can hire a consultant on your own to complete the portion of the work relating to your property and your operations. If you work with Schnitzer's consultant, Schnitzer will charge back to you only that portion of its costs that arise out of your tenancy. That is, to the extent the consultant is assessing your operations on the property you lease, you will have to pay for that. To the extent the consultant is assessing issues that arise out of operations on that property prior to your tenancy, Schnitzer will not charge you for that. Further (and this is true whether or not you use your own consultant), Schnitzer is going to have to do work that is focused on the second aspect of the investigation discussed above--looking at the potential "pathways" for contamination from all properties to the river. If it turns out that there is contamination on your property from your tenancy that requires this analysis to be performed, then Schnitzer will ask you to pay for your fair share of that work. Schnitzer does not believe that this is work that can be done partially by one consultant and partially by another, so Schnitzer intends to proceed to perform that work as cost effectively as possible and will then discuss with you what portion of the costs represent your fair share.

At this point in time, there are three things you need to do. First, if you have insurance that may provide coverage, you should provide notice of this claim and DEQ's November 24 demand to those insurers. Tab D of the enclosed materials is a sample letter to insurers. Second, you need to provide to Linda Wakefield at Schnitzer any of the following kinds of reports regarding your operations and/or the property you lease:

- Any environmental assessments, including "Phase I" or other property assessments
- Any Spill Prevention and Contingency Plans for your facility

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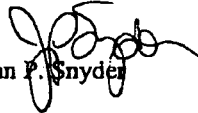
Mr. Tim Mihalek  
December 29, 1999  
Page 4

- Any Oregon State Fire Marshal Hazardous Substance reports filed for the years you operated on this property
- Any information on underground storage tanks (USTs), including DEQ UST registrations, decommissioning notices or reports
- A list of chemicals used on your facility (OSHA requires that you have a list of all chemicals to which your employees are exposed; if you have an MSDS binder, it is usually the table of contents for that binder)
- Any stormwater plans
- Any documentation of wastes (hazardous or non-hazardous) shipped offsite including Hazardous Waste annual reports or, if you are not required to file annual reports, manifests for shipments sent offsite

Third, you need to let Linda Wakefield at Schnitzer (323-2732) know whether you intend to have Schnitzer's consultant, Bridgewater Group, perform the first "assessment" phase of the investigation on your operations. Bridgewater Group has advised Schnitzer that the initial assessment of your property would cost less than \$5000.

We will let you know as soon as DEQ has provided its proposed scope of work for the investigation. If you have any questions in the meantime, please call me (294-9657) or Linda Wakefield (323-2732).

Very truly yours,

  
Joan P. Snyder

cc: Linda Wakefield (w/encl.)  
Tom Zelenka  
Jim Jakubiak (w/encl.)



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Mr. Tim Mihalek  
December 29, 1999  
Page 5

bc: Ross Rieke  
Matt Cusma.

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TDD (503) 221-1045

Internet: [www.stoel.com](http://www.stoel.com)

December 28, 1999

JOAN P. SNYDER  
*Direct Dial*  
(503) 294-9657  
email [jpsnyder@stoel.com](mailto:jpsnyder@stoel.com)

Mr. Andy Millican  
Portland Container Repair  
9449 North Burgard Road  
Portland OR 97203

**Re: DEQ Investigation Demand**

Dear Mr. Millican:

As you know, I am counsel for Schnitzer Investment Corp. ("Schnitzer"). We met at the meeting called by Linda Wakefield on December 6. I am writing to follow up on the summary we provided at the December 6 meeting regarding the demand that has been made upon Schnitzer with respect to the property that Portland Container Repair leases from Schnitzer. For your information, I am enclosing a copy of the sign-in sheet of those in attendance at the December 6 meeting.

We provided to you at the meeting a copy of the November 24, 1999 letter from the Oregon Department of Environmental Quality ("DEQ") demanding that Schnitzer perform an environmental remedial investigation of the property located at 12005 N. Burgard Road. DEQ's demand specifically requires that the property that you lease from Schnitzer be included in the investigation. DEQ is requiring Schnitzer to investigate whether there have been any releases or threatened releases of hazardous substances from your property that pose a threat to human health or the environment. In particular, DEQ has expressed concerns that the N. Burgard industrial park may be a source of the following substances, which have been detected in sediments in the Willamette River:

antimony	copper	nickel
arsenic	lead	zinc
barium	chromium	silver
cadmium	iron	total organotins
cobalt	manganese	

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Mr. Andy Millican  
December 28, 1999  
Page 2

butylbenzylphthalate  
carbazole  
dibenzofuran

2-methyl-naphthylene  
Total organic Carbon

Total low- and high-  
molecular weight  
polynuclear aromatic  
hydrocarbons (LPAHs  
and HPAHs,  
respectively)

For your information, LPAHs and HPAHs are constituents of petroleum-based materials, including oils, lubricants and greases.

Although a portion of DEQ's demand relates to historical uses of the property that may precede your tenancy, other portions of DEQ's demand relate specifically to your current operations. In particular, it requires that Schnitzer characterize "all release mechanisms" from tenant properties to the Willamette River, including overland discharges, storm water runoff, direct releases and groundwater seepage. It also requires development of "source control measures" to be implemented on the property you lease.

All of DEQ's demands to investigate and monitor the current operations and practices on your facility are demands that arise directly out of your tenancy. They are therefore subject to the indemnity that you provided to Schnitzer in your lease, and Schnitzer will look to you to reimburse it for any costs that it incurs performing this work. In addition, Schnitzer will hold you liable under Oregon Revised Statute 465.255 to the extent any costs it incurs arise out of releases or threats of the release of hazardous substances during your tenancy.

Since our meeting, Schnitzer has communicated to DEQ notice of its intent to conduct the remedial investigation itself, rather than allow DEQ to come onto the property and conduct the investigation through DEQ contractors. I have enclosed a copy of the notice Schnitzer provided to DEQ. Schnitzer's notice advises DEQ that its investigation of tenant-controlled premises will be dependent upon your cooperation. I have orally advised DEQ that, based on our meeting, we are assuming such cooperation will exist.

DEQ's November 24 demand letter states that it will be providing Schnitzer with a proposed voluntary cleanup agreement and a scope of work tailored to deal with the issues identified at the International Terminal industrial area. Schnitzer has not yet received that from DEQ, but we do know that the proposed scope of work and agreement will resemble the generic forms that were provided with DEQ's November 24 letter. Schnitzer expects that it will negotiate with DEQ over the extent of the work to be performed, with the expectation that it will only do the work that DEQ has authority to require and that it will focus on the issues raised by DEQ in the Strategy Recommendations memorandum included with DEQ's November 24 letter.



## STOEL RIVES LLP

Mr. Andy Millican  
December 28, 1999  
Page 3

We know that the required work, as it relates to your tenancy, will have two aspects. The first aspect will look specifically at the property that you lease to determine if there have been any releases of hazardous substances or whether, based on your operations, there are any potentials for the release of hazardous substances. As we discussed at the meeting, this will include a "Phase I" type of environmental assessment of your current operations. To the extent any such work has already been performed and you have a report you can provide, that will reduce the remaining work to be done. Depending on what that assessment reveals, and depending on what DEQ's specific scope of work requires, more work (including sampling, analysis and more report writing) may or may not be required with respect to your operations.

The second aspect of the required work will be exploring the potential for any contamination from your property to reach the river or any other receptor of concern to DEQ (looking at potential "pathways"). If the first aspect of the work has revealed no source of contamination on your property, this will not be something you need to address. If there have been releases or if your operations create the potential for releases, DEQ will require an assessment of surface water, groundwater and storm sewers pathways to determine whether those substances are getting to the river or otherwise creating a risk to human health or the environment.

As we explained at the meeting, Schnitzer expects you to bear the cost of complying with those portions of the DEQ demand that arise out of your tenancy. There are two ways that the required work can be accomplished. You can cooperate with Schnitzer and the environmental consultant it has hired, Bridgewater Group, to perform that portion of the required investigation that relates to your property and your operations. Alternatively, you can hire a consultant on your own to complete the portion of the work relating to your property and your operations. If you work with Schnitzer's consultant, Schnitzer will charge back to you only that portion of its costs that arise out of your tenancy. That is, to the extent the consultant is assessing your operations on the property you lease, you will have to pay for that. To the extent the consultant is assessing issues that arise out of operations on that property prior to your tenancy, Schnitzer will not charge you for that. Further (and this is true whether or not you use your own consultant), Schnitzer is going to have to do work that is focused on the second aspect of the investigation discussed above--looking at the potential "pathways" for contamination from all properties to the river. If it turns out that there is contamination on your property from your tenancy that requires this analysis to be performed, then Schnitzer will ask you to pay for your fair share of that work. Schnitzer does not believe that this is work that can be done partially by one consultant and partially by another, so Schnitzer intends to proceed to perform that work as cost effectively as possible and will then discuss with you what portion of the costs represent your fair share.



STOEL RIVES LLP

Mr. Andy Millican  
December 28, 1999  
Page 4

At this point in time, there are three things you need to do. First, if you have insurance that may provide coverage, you should provide notice of this claim and DEQ's November 24 demand to those insurers. Second, you need to provide to Linda Wakefield at Schnitzer any of the following kinds of reports regarding your operations and/or the property you lease:

- Any environmental assessments, including "Phase I" or other property assessments
- Any Spill Prevention and Contingency Plans for your facility
- Any Oregon State Fire Marshal Hazardous Substance reports filed for the years you operated on this property
- Any information on underground storage tanks (USTs), including DEQ UST registrations, decommissioning notices or reports
- A list of chemicals used on your facility (OSHA requires that you have a list of all chemicals to which your employees are exposed; if you have an MSDS binder, it is usually the table of contents for that binder)
- Any stormwater plans
- Any documentation of wastes (hazardous or non-hazardous) shipped offsite including Hazardous Waste annual reports or, if you are not required to file annual reports, manifests for shipments sent offsite

Third, you need to let Linda Wakefield at Schnitzer (323-2732) know whether you intend to have Schnitzer's consultant, Bridgewater Group, perform the first "assessment" phase of the investigation on your operations. As Ross Rieke of Bridgewater explained at the December 6 meeting, he anticipates that the initial assessment of your property would cost less than \$5000.

We will let you know as soon as DEQ has provided its proposed scope of work for the investigation. If you have any questions in the meantime, please call me (294-9657) or Linda Wakefield (323-2732).

Very truly yours,

  
Joan P. Snyder

cc: Linda Wakefield  
Tom Zelenka  
Jim Jakubiak



Mr. Andy Millican  
December 28, 1999  
Page 5

bc: Ross Rieke  
Matt Cusma

Portland3-1275001.1 0068160-00003

SCHN00271067



# STOEL RIVES LLP

ATTORNEYS

STANDARD INSURANCE CENTER  
900 SW FIFTH AVENUE, SUITE 2600  
PORTLAND, OREGON 97204-1268  
Phone (503) 224-3380 Fax (503) 220-2480  
TDD (503) 221-1045  
Internet: www.stoel.com

January 3, 2000

JOAN P. SNYDER  
Direct Dial  
(503) 294-9657  
email jpsnyder@stoel.com

Mr. Rod Hull  
Portland Blast Media  
7875 SW Alden Street  
Portland, OR 97223

**Re: DEQ Investigation Demand**

Dear Mr. Hull:

I am counsel for Schnitzer Investment Corp. ("Schnitzer"). Linda Wakefield at Schnitzer has given me your name. I am writing to alert you to a demand that the Oregon Department of Environmental Quality ("DEQ") has made upon Schnitzer that relates to the property that Portland Blast Media leases from Schnitzer.

At tab A of the enclosed materials is a copy of a November 24, 1999 letter from DEQ demanding that Schnitzer perform an environmental remedial investigation of the property located at 12005 N. Burgard Road. DEQ's demand specifically requires that the property that you lease from Schnitzer be included in the investigation. DEQ is requiring Schnitzer to investigate whether there have been any releases or threatened releases of hazardous substances from your property that pose a threat to human health or the environment. In particular, DEQ has expressed concerns that the N. Burgard industrial park may be a source of the following substances, which have been detected in sediments in the Willamette River:

antimony	nickel	Total low- and high-
arsenic	zinc	molecular weight
barium	silver	polynuclear aromatic
cadmium	total organotins	hydrocarbons (LPAHs
cobalt	butylbenzylphthalate	and HPAHs,
copper	carbazole	respectively)
lead	dibenzofuran	
chromium	2-methyl-naphthylene	
iron	Total organic Carbon	
manganese		

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SEATTLE

PORTLAND

VANCOUVER, WA

BOISE

SALT LAKE CITY

WASHINGTON, D.C.

SCHN00271068



STOEL RIVES LLP

Mr. Rod Hull  
January 3, 2000  
Page 2

For your information, LPAHs and HPAHs are constituents of petroleum-based materials, including oils, lubricants and greases.

Although a portion of DEQ's demand relates to historical uses of the property that may precede your tenancy, other portions of DEQ's demand relate specifically to your current operations. In particular, it requires that Schnitzer characterize "all release mechanisms" from tenant properties to the Willamette River, including overland discharges, storm water runoff, direct releases and groundwater seepage. It also requires development of "source control measures" to be implemented on the property you lease.

All of DEQ's demands to investigate and monitor the current operations and practices on your facility are demands that arise directly out of your tenancy. They are therefore subject to the indemnity that you provided to Schnitzer in your lease (see tab C of the enclosed materials), and Schnitzer will look to you to reimburse it for any costs that it incurs performing this work. In addition, Schnitzer will hold you liable under Oregon Revised Statute 465.255 to the extent any costs it incurs arise out of releases or threats of the release of hazardous substances during your tenancy.

In response to DEQ's November 24 letter, Schnitzer has communicated to DEQ notice of its intent to conduct the remedial investigation itself, rather than allow DEQ to come onto the property and conduct the investigation through DEQ contractors. I have enclosed a copy of the notice Schnitzer provided to DEQ. Schnitzer's notice advises DEQ that its investigation of tenant-controlled premises will be dependent upon your cooperation.

DEQ's November 24 demand letter states that it will be providing Schnitzer with a proposed voluntary cleanup agreement and a scope of work tailored to deal with the issues identified at the International Terminal industrial area. Schnitzer has not yet received that from DEQ, but we do know that the proposed scope of work and agreement will resemble the generic forms that were provided with DEQ's November 24 letter. Schnitzer expects that it will negotiate with DEQ over the extent of the work to be performed, with the expectation that it will only do the work that DEQ has authority to require and that it will focus on the issues raised by DEQ in the Strategy Recommendations memorandum included with DEQ's November 24 letter.

We know that the required work, as it relates to your tenancy, will have two aspects. The first aspect will look specifically at the property that you lease to determine if there have been any releases of hazardous substances or whether, based on your operations, there are any potentials for the release of hazardous substances. This will include a "Phase I" type of environmental assessment of your current operations. To the extent any such work has already been performed and you have a report you can provide, that will reduce the remaining work to be done. Depending on what that assessment reveals, and depending on what DEQ's specific scope



STOEL RIVES LLP

Mr. Rod Hull  
January 3, 2000  
Page 3

of work requires, more work (including sampling, analysis and more report writing) may or may not be required with respect to your operations.

The second aspect of the required work will be exploring the potential for any contamination from your property to reach the river or any other receptor of concern to DEQ (looking at potential "pathways"). If the first aspect of the work has revealed no source of contamination on your property, this will not be something you need to address. If there have been releases or if your operations create the potential for releases, DEQ will require an assessment of surface water, groundwater and storm sewers pathways to determine whether those substances are getting to the river or otherwise creating a risk to human health or the environment.

Schnitzer expects you to bear the cost of complying with those portions of the DEQ demand that arise out of your tenancy. There are two ways that the required work can be accomplished. You can cooperate with Schnitzer and the environmental consultant it has hired, Bridgewater Group, to perform that portion of the required investigation that relates to your property and your operations. Schnitzer believes that will be the most cost effective way for you to manage this. Alternatively, you can hire a consultant on your own to complete the portion of the work relating to your property and your operations. If you work with Schnitzer's consultant, Schnitzer will charge back to you only that portion of its costs that arise out of your tenancy. That is, to the extent the consultant is assessing your operations on the property you lease, you will have to pay for that. To the extent the consultant is assessing issues that arise out of operations on that property prior to your tenancy, Schnitzer will not charge you for that. Further (and this is true whether or not you use your own consultant), Schnitzer is going to have to do work that is focused on the second aspect of the investigation discussed above—looking at the potential "pathways" for contamination from all properties to the river. If it turns out that there is contamination on your property from your tenancy that requires this analysis to be performed, then Schnitzer will ask you to pay for your fair share of that work. Schnitzer does not believe that this is work that can be done partially by one consultant and partially by another, so Schnitzer intends to proceed to perform that work as cost effectively as possible and will then discuss with you what portion of the costs represent your fair share.

At this point in time, there are three things you need to do. First, if you have insurance that may provide coverage, you should provide notice of this claim and DEQ's November 24 demand to those insurers. Tab D of the enclosed materials is a sample letter to insurers. Second, you need to provide to Linda Wakefield at Schnitzer any of the following kinds of reports regarding your operations and/or the property you lease:

- Any environmental assessments, including "Phase I" or other property assessments
- Any Spill Prevention and Contingency Plans for your facility



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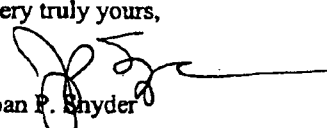
Mr. Rod Hull  
January 3, 2000  
Page 4

- Any Oregon State Fire Marshal Hazardous Substance reports filed for the years you operated on this property
- Any information on underground storage tanks (USTs), including DEQ UST registrations, decommissioning notices or reports
- A list of chemicals used on your facility (OSHA requires that you have a list of all chemicals to which your employees are exposed; if you have an MSDS binder, it is usually the table of contents for that binder)
- Any stormwater plans
- Any documentation of wastes (hazardous or non-hazardous) shipped offsite including Hazardous Waste annual reports or, if you are not required to file annual reports, manifests for shipments sent offsite

Third, you need to let Linda Wakefield at Schnitzer (323-2732) know whether you intend to have Schnitzer's consultant, Bridgewater Group, perform the first "assessment" phase of the investigation on your operations. Bridgewater Group has advised Schnitzer that the initial assessment of your property would cost less than \$5000.

We will let you know as soon as DEQ has provided its proposed scope of work for the investigation. If you have any questions in the meantime, please call me (294-9657) or Linda Wakefield (323-2732).

Very truly yours,

  
Joan P. Snyder

cc: Linda Wakefield (w/encl.)  
Tom Zelenka  
Jim Jakubiak (w/encl.)



STOEL RIVES LLP

Mr. Rod Hull  
January 3, 2000  
Page 5

bc: Ross Rieke  
Matt Cusma

Portland3-1277873.1 0068160-00003

SCHN00271072



**VOLUNTARY CLEANUP PROGRAM**  
**INTENT TO PARTICIPATE**

**Identification of Site**

Site Name: Schnitzer Investment Corp. \*  
Site Address: 12005 Burgard Road in Portland, Oregon  
Owner/Operator: Schnitzer Steel Industries, Inc.  
Mailing Address: Attn: Tom Zelenka, Schnitzer Group  
P.O. Box 10047, Portland, OR 97296-0047

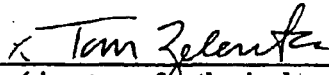
**Intent to Participate**

The undersigned intends to negotiate in good faith a written agreement with DEQ to provide for voluntary performance of a remedial investigation under DEQ oversight. The agreement will describe the project activities of each party and will require the undersigned to reimburse DEQ for oversight costs. \*\*

With this Intent to Participate, the undersigned does not admit or assume liability regarding the site.

Please execute this Intent to Participate in the space below and return it to:

Eric Blischke  
Department of Environmental Quality  
Waste Management and Cleanup Division  
811 S.W. Sixth Avenue  
Portland, OR 97204

By:   
(signature of authorized  
representative)

Name: Tom Zelenka  
(print or type)

Title: Manager, Legislative/  
Environmental & Public Affairs

Company: Schnitzer Steel Industries, Inc.

Date: December 22, 1999

Telephone: 503-323-2821

SCHN00271073



\* Excluding that portion of the site formerly leased to Palmco Incorporated, Premier Edible Oils and C&T Quincy Foods.

\*\* Schnitzer Investment Corp. is willing to sign a Voluntary Cleanup Agreement to perform such remedial investigation and feasibility study activities and reimburse Oregon DEQ for such costs as Oregon DEQ has a statutory right to require from it under the Environmental Cleanup Law, Oregon Revised Statutes 465.200 et seq., provided that the terms of such agreement are acceptable to it and are as favorable as the terms provided to other entities performing voluntary investigation and feasibility studies within the Portland Harbor. To the extent Schnitzer Investment Corp.'s obligations are dependent upon cooperation from its tenants, it shall use its best efforts to obtain such cooperation, but it is not a guarantor of performance by its tenants. Schnitzer Investment Corp. notes that DEQ's Strategy Recommendation contains factual inaccuracies and refers to several historical activities which have not occurred during the time period of Schnitzer Investment Corp.'s ownership of the property.



STOEL RIVES LLP  
ATTORNEYS

STANDARD INSURANCE CENTER  
900 SW FIFTH AVENUE, SUITE 2600  
PORTLAND, OREGON 97204-1268  
Phone (503) 224-3380 Fax (503) 220-2480  
TDD (503) 222-1045  
Internet: www.stoel.com

December 6, 1999

JOAN P. SNYDER  
Direct Dial  
(503) 294-9657  
email jpsnyder@stoel.com

Mr. Gary Scorgie  
Western Machine Works  
9006 North Sever Court  
Portland OR 97203

Re: DEQ Investigation Demand

Dear Mr. Scorgie:

As you know, I am counsel for Schnitzer Investment Corp. ("Schnitzer"). We met at the meeting called by Linda Wakefield on December 6. I am writing to follow up on the summary we provided at the December 6 meeting regarding the demand that has been made upon Schnitzer with respect to the property that Western Machine Works leases from Schnitzer. For your information, I am enclosing a copy of the sign-in sheet of those in attendance at the December 6 meeting.

We provided to you at the meeting a copy of the November 24, 1999 letter from the Oregon Department of Environmental Quality ("DEQ") demanding that Schnitzer perform an environmental remedial investigation of the property located at 12005 N. Burgard Road. DEQ's demand specifically requires that the property that you lease from Schnitzer be included in the investigation. DEQ is requiring Schnitzer to investigate whether there have been any releases or threatened releases of hazardous substances from your property that pose a threat to human health or the environment. In particular, DEQ has expressed concerns that the N. Burgard industrial park may be a source of the following substances, which have been detected in sediments in the Willamette River:

antimony	copper	nickel
arsenic	lead	zinc
barium	chromium	silver
cadmium	iron	total organotins
cobalt	manganese	

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SEATTLE

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BOISE

SALT LAKE CITY

WASHINGTON, D.C.

SCHN00271075



## STOEL RIVES LLP

Mr. Gary Scorgie  
December 6, 1999  
Page 2

butylbenzylphthalate  
carbazole  
dibenzofuran

2-methyl-naphthylene  
Total organic Carbon

Total low- and high-  
molecular weight  
polynuclear aromatic  
hydrocarbons (LPAHs  
and HPAHs,  
respectively)

For your information, LPAHs and HPAHs are constituents of petroleum-based materials, including oils, lubricants and greases.

Although a portion of DEQ's demand relates to historical uses of the property that may precede your tenancy, other portions of DEQ's demand relate specifically to your current operations. In particular, it requires that Schnitzer characterize "all release mechanisms" from tenant properties to the Willamette River, including overland discharges, storm water runoff, direct releases and groundwater seepage. It also requires development of "source control measures" to be implemented on the property you lease.

All of DEQ's demands to investigate and monitor the current operations and practices on your facility are demands that arise directly out of your tenancy. They are therefore subject to the indemnity that you provided to Schnitzer in your lease, and Schnitzer will look to you to reimburse it for any costs that it incurs performing this work. In addition, Schnitzer will hold you liable under Oregon Revised Statute 465.255 to the extent any costs it incurs arise out of releases or threats of the release of hazardous substances during your tenancy.

Since our meeting, Schnitzer has communicated to DEQ notice of its intent to conduct the remedial investigation itself, rather than allow DEQ to come onto the property and conduct the investigation through DEQ contractors. I have enclosed a copy of the notice Schnitzer provided to DEQ. Schnitzer's notice advises DEQ that its investigation of tenant-controlled premises will be dependent upon your cooperation. I have orally advised DEQ that, based on our meeting, we are assuming such cooperation will exist.

DEQ's November 24 demand letter states that it will be providing Schnitzer with a proposed voluntary cleanup agreement and a scope of work tailored to deal with the issues identified at the International Terminal industrial area. Schnitzer has not yet received that from DEQ, but we do know that the proposed scope of work and agreement will resemble the generic forms that were provided with DEQ's November 24 letter. Schnitzer expects that it will negotiate with DEQ over the extent of the work to be performed, with the expectation that it will only do the work that DEQ has authority to require and that it will focus on the issues raised by DEQ in the Strategy Recommendations memorandum included with DEQ's November 24 letter.



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Mr. Gary Scorgie  
December 6, 1999  
Page 3

We know that the required work, as it relates to your tenancy, will have two aspects. The first aspect will look specifically at the property that you lease to determine if there have been any releases of hazardous substances or whether, based on your operations, there are any potentials for the release of hazardous substances. As we discussed at the meeting, this will include a "Phase I" type of environmental assessment of your current operations. To the extent any such work has already been performed and you have a report you can provide, that will reduce the remaining work to be done. Depending on what that assessment reveals, and depending on what DEQ's specific scope of work requires, more work (including sampling, analysis and more report writing) may or may not be required with respect to your operations.

The second aspect of the required work will be exploring the potential for any contamination from your property to reach the river or any other receptor of concern to DEQ (looking at potential "pathways"). If the first aspect of the work has revealed no source of contamination on your property, this will not be something you need to address. If there have been releases or if your operations create the potential for releases, DEQ will require an assessment of surface water, groundwater and storm sewers pathways to determine whether those substances are getting to the river or otherwise creating a risk to human health or the environment.

As we explained at the meeting, Schnitzer expects you to bear the cost of complying with those portions of the DEQ demand that arise out of your tenancy. There are two ways that the required work can be accomplished. You can cooperate with Schnitzer and the environmental consultant it has hired, Bridgewater Group, to perform that portion of the required investigation that relates to your property and your operations. Alternatively, you can hire a consultant on your own to complete the portion of the work relating to your property and your operations. If you work with Schnitzer's consultant, Schnitzer will charge back to you only that portion of its costs that arise out of your tenancy. That is, to the extent the consultant is assessing your operations on the property you lease, you will have to pay for that. To the extent the consultant is assessing issues that arise out of operations on that property prior to your tenancy, Schnitzer will not charge you for that. Further (and this is true whether or not you use your own consultant), Schnitzer is going to have to do work that is focused on the second aspect of the investigation discussed above--looking at the potential "pathways" for contamination from all properties to the river. If it turns out that there is contamination on your property from your tenancy that requires this analysis to be performed, then Schnitzer will ask you to pay for your fair share of that work. Schnitzer does not believe that this is work that can be done partially by one consultant and partially by another, so Schnitzer intends to proceed to perform that work as cost effectively as possible and will then discuss with you what portion of the costs represent your fair share.



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Mr. Gary Scorgie  
December 6, 1999  
Page 4

At this point in time, there are three things you need to do. First, if you have insurance that may provide coverage, you should provide notice of this claim and DEQ's November 24 demand to those insurers. Second, you need to provide to Linda Wakefield at Schnitzer any of the following kinds of reports regarding your operations and/or the property you lease:

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- A list of chemicals used on your facility (OSHA requires that you have a list of all chemicals to which your employees are exposed; if you have an MSDS binder, it is usually the table of contents for that binder)
- Any stormwater plans
- Any documentation of wastes (hazardous or non-hazardous) shipped offsite including Hazardous Waste annual reports or, if you are not required to file annual reports, manifests for shipments sent offsite

Third, you need to let Linda Wakefield at Schnitzer (323-2732) know whether you intend to have Schnitzer's consultant, Bridgewater Group, perform the first "assessment" phase of the investigation on your operations. As Ross Rieke of Bridgewater explained at the December 6 meeting, he anticipates that the initial assessment of your property would cost less than \$5000.

We will let you know as soon as DEQ has provided its proposed scope of work for the investigation. If you have any questions in the meantime, please call me (294-9657) or Linda Wakefield (323-2732).

Very truly yours,

Joan P. Snyder

cc: Linda Wakefield  
Tom Zelenka  
Jim Jakubiak



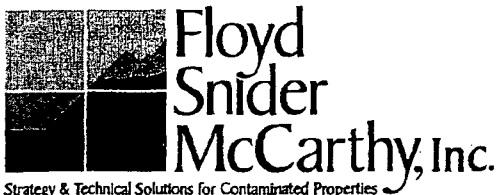
Mr. Gary Scorgie  
December 6, 1999  
Page 5

bc: Ross Rieke  
Matt Cusma

PortInd13-1274997.2 0068160-00003

SCHN00271079





83 South King Street Suite 614 Seattle, Washington 98104 tel: 206.292.2078 fax: 206.682.7867

March 3, 2003

Alicia Voss  
Voluntary Cleanup Program  
Northwest Region  
2020 SW Fourth Ave. Suite 400  
Portland, OR 97204

**SUBJECT: SCHNITZER INTERNATIONAL TERMINAL: NOTICE OF FUTURE SEDIMENT SAMPLING, MARCH 11<sup>TH</sup> AND 12<sup>TH</sup> 2003**

Dear Ms. Voss:

Floyd Snider McCarthy (FSM) has been retained by Schnitzer Steel Inc., to perform sediment sampling in advance of future maintenance dredging at the International Terminal located in Portland. The purpose of this sampling event is to generate data that can be used to estimate the dredge sediment quality that would result from the proposed dredging of Berths 1 through 5 at International Terminal. Berths 1 through 3 are located within the International Terminal slip adjacent to the Burgard Yard; Berths 4 and 5 are located on the Willamette River side of the facility.

Data generated during this sampling event will be used to evaluate sediment quality consistent with the suggested analyte list found in the Dredged Material Evaluation Framework for the Lower Columbia River Management Area. It is anticipated that this data will be used during the drafting of a joint permit application for this berth maintenance dredging. The permit application is tentatively scheduled for submission to the U.S. Army Corps of Engineers in Spring 2003.

This sampling event is currently planned for March 11 and 12, 2003.

We would be happy to answer any questions you have related to this sampling. Please contact me at (206) 292-2078 or Jim Jakubiak at (503) 286-6976.

Sincerely yours,

Floyd Snider McCarthy, Inc.

A handwritten signature in black ink, appearing to read "Allison D. Geiselbrecht", is written over the typed name.

Allison D. Geiselbrecht, Ph.D., Senior Scientist

Copies: Jim Jakubiak, Teri A. Floyd



**RECEIVED**

**MAR 10 2003**

**BINGHAM MCCUTCHEN  
LA-CALENDAR**

**SCHN00271450**





**BRIDGEWATER GROUP, INC.**

4500 SW Kruse Way, Suite 110  
LAKE OSWEGO, OR 97035  
TEL: (503) 675-5252  
FAX: (503) 675-1960  
mieke@bridgeh2o.com

July 9, 2004

Ms. Alicia Voss  
Oregon Department of Environmental Quality  
2020 SW Fourth Ave., Suite 400  
Portland, OR 97201-4987

Subject: Quarterly Status Report  
April through June 2004  
Burgard Industrial Park RI Project

This letter presents the quarterly status report for the period April through June 2004 for the Burgard Industrial Park RI project in Portland, Oregon.

#### **Work Completed April through June 2004**

- Prepared quarterly status report and submitted to DEQ on April 9, 2004.
- Prepared groundwater monitoring summary report for recently completed 1-year groundwater monitoring program.

#### **Activities Planned July through September 2004**

- Submit groundwater monitoring summary report for recently completed 1-year groundwater monitoring program.
- Prepare quarterly status report.

#### **Sampling, Test Results, and Other Data Generated April through June 2004**

Sampling, test results, and other data generated during the reporting period were, or will be, presented in project deliverables submitted to DEQ.

#### **Problems Experienced April through June 2004**

No problems other than those documented above were encountered during the reporting period.

SCHN00271647



Ms. Alicia Voss  
Page 2  
July 9, 2004

Please call if you have any questions.

Sincerely,

**BRIDGEWATER GROUP, INC.**

A handwritten signature in black ink, appearing to read 'R.D. Rieke', with a stylized flourish at the end.

Ross D. Rieke, P.E.  
Vice President  
Environmental Consultant

cc: Mat Cusma/Schnitzer

SCHN00271648





BRIDGEWATER GROUP, INC.

4500 SW Kruse Way, Suite 110  
LAKE OSWEGO, OR 97035  
TEL: (503) 675-5252  
FAX: (503) 675-1960  
mieke@bridgeh2o.com

April 8, 2003

Ms. Alicia Voss  
Oregon Department of Environmental Quality  
2020 SW Fourth Ave., Suite 400  
Portland, OR 97201-4987

Subject: Quarterly Status Report  
January through March 2003  
Burgard Industrial Park RI Project

This letter presents the quarterly status report for the period January through March 2003 for the Burgard Industrial Park RI/FS project in Portland, Oregon.

#### **Work Completed January through March 2003**

- Submitted *Phase II RI Work Plan* to DEQ on February 7, 2003.
- Received comments from DEQ regarding August 8, 2002, *Enhanced Best Management Plan*, December 20, 2002, *Groundwater Monitoring Plan*, and February 7, 2003, *Phase II RI Work Plan* in a letter dated February 25, 2003.
- Submitted *Revised Groundwater Monitoring Plan* to DEQ on March 17, 2003.
- Performed groundwater monitoring on March 23, 2003.
- Submitted *DEQ Information Request* to DEQ on March 25, 2003.

#### **Activities Planned April through June 2003**

- Repair and redevelop groundwater monitoring well MW-4.
- Perform Phase II RI soil and groundwater sampling on April 15, 2003.
- Review existing BMPs as part of the EBMP program.
- Submit results of groundwater monitoring to DEQ.
- Submit results of Phase II RI to DEQ.
- Prepare quarterly status report.

SCHN00271721



Ms. Alicia Voss  
Page 2  
April 8, 2003

**Sampling, Test Results, and Other Data Generated January through March 2003**

Sampling, test results, and other data generated during January through March 2003 were or will be presented in data reports prepared for each sampling event.

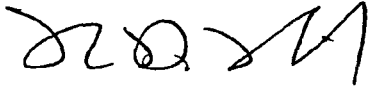
**Problems Experienced January through March 2003**

No problems were encountered during January through March 2003.

Please call if you have any questions.

Sincerely,

**BRIDGEWATER GROUP, INC.**

A handwritten signature in black ink, appearing to read 'RD Rieke', is written over the printed name.

Ross D. Rieke, P.E.  
Vice President  
Environmental Consultant

cc: Mat Cusma/Schnitzer

SCHN00271722





BRIDGEWATER GROUP, INC.

4500 SW Kruse Way, Suite 110  
LAKE OSWEGO, OR 97035  
TEL: (503) 675-5252  
FAX: (503) 675-1960  
rrieke@bridgeh2o.com

March 26, 2003

Mr. Jim Anderson  
Oregon Department of Environmental Quality  
2020 SW Fourth Ave., Suite 400  
Portland, OR 97201-4987

Dear Mr. Anderson:

The purpose of this letter is to request access to, and copies of, the following DEQ files and information pertaining to the Portland Harbor project:

- Email correspondence with US Environmental Protection Agency (EPA), Natural Resource Damage Trustees (Trustees), Tribes, Lower Willamette Group (LWG), City of Portland, and any other party pertaining to the Portland Harbor project.
- "White papers" prepared to present technical, legal, or administrative positions on any issue pertaining to the Portland Harbor project.
- Notes prepared to document meetings with EPA, Trustees, Tribes, LWG, City of Portland, and any other party pertaining to the Portland Harbor project.
- All other submittals, reports, correspondence, memoranda, letters, notes, calculations, drawings, figures, data, photographs, videos, recordings, and telephone conversation notes pertaining to the Portland Harbor project and provided to DEQ after July 2002. These include:

- February 26, 2003, Draft Lower Willamette River, Summer 2002, Multibeam Bathymetric Survey Report.
- February 18, 2003, Draft Superfund Site Technical Memorandum: Results of Seep Reconnaissance Survey River Mile 2 - 10.5 Lower Willamette River.
- February 14, 2003, Draft Technical Memorandum: Lamprey Ammocoete and Benthic Infaunal Biomass Reconnaissance of the Lower Willamette River.

Thank you for your help in this manner. Please give me a call and we can discuss the most efficient manner to obtain this information.

Sincerely,

BRIDGEWATER GROUP, INC.

Ross D. Rieke, P.E.  
Vice President  
Environmental Consultant

SCHN00271733





## DEQ Information Request Burgard Industrial Park

TO: Alicia Voss/DEQ  
COPY: Mat Cusma/Schnitzer  
FROM: Ross Rieke/Bridgewater Group  
DATE: March 25, 2003

This memorandum presents information you requested in a February 25, 2003 letter regarding the Burgard Industrial Park in Portland, Oregon. Your letter requested the following:

- Information on storm water outfalls at the Burgard Industrial Park.
- Schedule for implementation of the Enhanced Best Management Practices (EBMP) program at the site.
- Schedule for the Phase II remedial investigation sampling and analysis.

This letter also transmits to you an updated *Storm Water Pollution Control Plan* for the Schnitzer Steel/International Terminal portion of the Burgard site.

### **Storm Water Outfall Status**

Your letter requested additional information on several of the storm water outfalls at the Burgard Industrial Park site. The attached Table 1 addresses your identified data gaps.

As you are aware, Schnitzer continues to upgrade and improve the storm water management system at the Burgard site. Numerous improvements have been implemented since the submission of the December 21, 2000, *Storm Water System Assessment* report. Sand filters and coalescing oil/water separator treatment systems have been added, remnant outfalls have been positively identified and sealed, and Outfall 1 has been repaired. Schnitzer also continues to improve the Best Management Practices (BMPs) at the site.

In accordance with the NPDES General Storm Water Permit, Schnitzer has prepared a revised *Storm Water Pollution Control Plan* for the Schnitzer Steel/International Terminal portion of the Burgard site reflecting these improvements. The plan also reflects increased understanding of the overall storm water collection and conveyance system obtained during the performance of the remedial investigation and during the design and construction of the recent improvements. A copy of the updated storm water plan is enclosed and includes a drawing showing the current drainage areas and associated treatment systems and outfalls.

Based on the recent changes to the storm water system and additional information regarding its configuration, the following outfalls will be included in the EBMP program,

Outfall 1	Outfall 2	Outfall 3A	Outfall 4A
Outfall 5A	Outfall 6A	Outfall 10	Outfall 13
Outfall 14	Outfall 15	Outfall 19	Outfall 20



**Other DEQ Comments on EBMP Program**

Your February 25, 2003 letter also provided several comments regarding the EBMP program. These comments pertained to the following:

- The potential for contaminants to be migrating from the site to the river.
- Appropriateness of using NPDES benchmark values to assess the potential for storm water runoff to be a pathway of concern.
- Dataset to be used in the assessment of to-date storm water monitoring data.
- Specifics of the storm water monitoring to be performed during the EBMP program.

These issues and comments will be addressed in the various documents and deliverables to be prepared during the implementation of the EBMP program.

**EBMP Implementation Schedule**

The attached Gant chart shows the anticipated schedule for the EBMP program. Consistent with the EBMP plan, the initial tasks will consist of identifying and assessing the effectiveness of the existing BMPs at the site. This process includes reviewing the storm water monitoring data collected to date. The results of this review will be presented in a report to DEQ this summer with a meeting shortly after with DEQ to discuss the next steps in the EBMP program. Identification, assessment, and implementation/construction of any additional BMPs are anticipated during Fall 2003 and Winter and Spring 2004.

**Phase II RI Schedule**

We are planning to perform the Phase II RI field explorations on April 17. A brief memorandum presenting the results of the Phase II sampling and analysis will be provided by May 23, 2003.

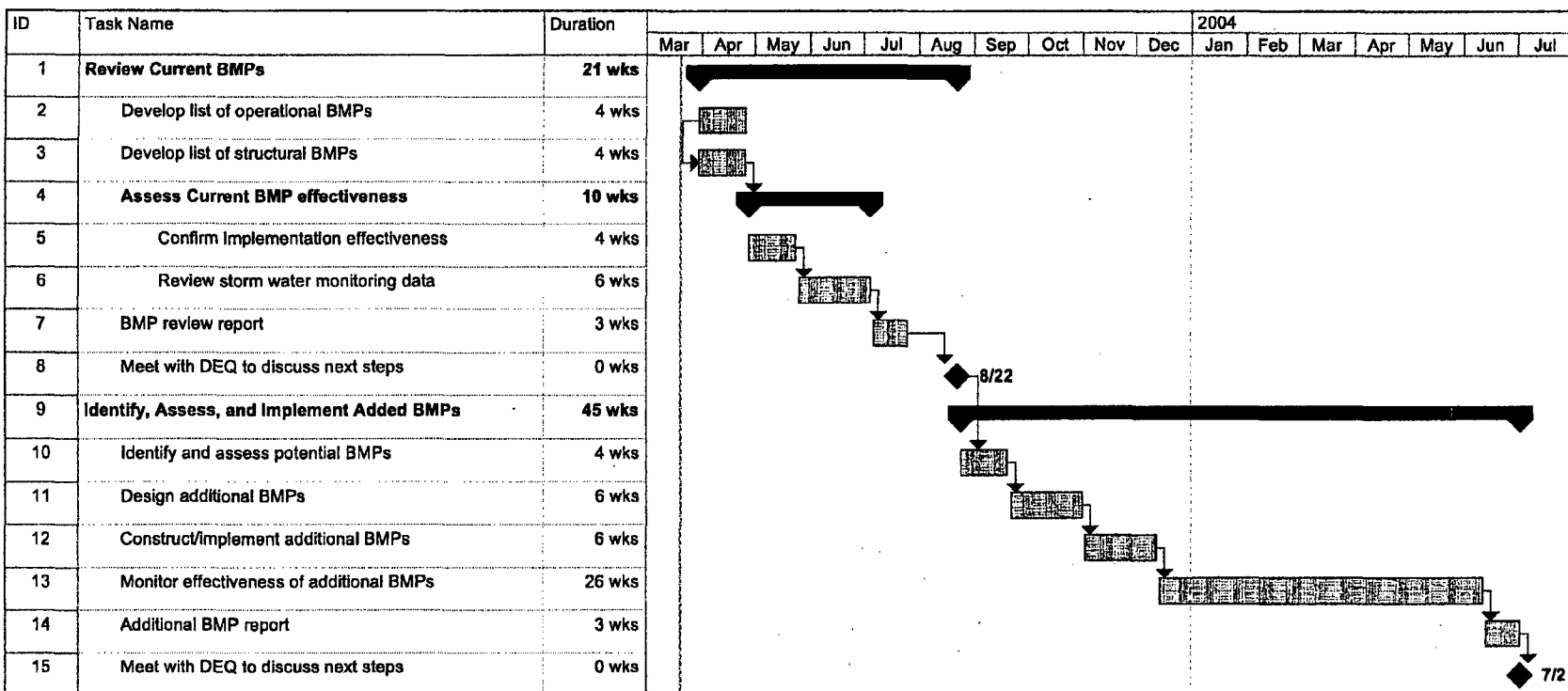
Please call if you have any questions.



**Table 1**  
**DEQ Requested Storm Water Outfall Information**  
**Burgard Industrial Park Remedial Investigation**

<b>Outfalls (OF)</b>	<b>Monitoring History</b>	<b>DEQ Data Gap</b>	<b>Response to Data Gap</b>
Outfall 8	Monitored in 1998 and 1999. Now indicated as remnant and not monitored.	Please provide information on the current status of this outfall.	OF8 was a remnant and has recently been cut and grouted. The monitoring data labeled "OF8" are actually blind duplicates of samples collected from other outfalls (OF7 in 1998 and OF4 in 1999)
Outfalls 9 and 10	1200R monitoring only in 1993/94. OF-9 is now indicated as remnant and not monitored.	Provide additional information on the current status and proposed evaluation of these two outfalls.	OF9 was a remnant and has recently been cut and grouted. The monitoring data attributed to OF9 in 1993 is believed to be actually from OF10. OF10 has not been sampled since 1994 based on the presumption that OF7 is representative of the discharge at OF10 (NPDES general storm water permit condition B.1.c).
Outfalls 11 and 12	1200R monitoring from 1993 to 1996. Both now marked as remnant outfalls.	Please provide information on the current status of the outfalls.	OF11 is a remnant of the shipyard drainage system and is no longer connected to any catch basins and does not discharge storm water. OF12 was a remnant outfall and has recently been cut and grouted. It is not known what the data labeled "OF11" and "OF12" during 1993 to 1996 represents.
Outfall 13	No monitoring record for OF-13.	Please provide information on the current status of OF-13.	OF13 is a functioning outfall draining Basin 13 located on the slip (See Drawing 1 in the updated Stormwater Pollution Control Plan). OF13 is not sampled based on the presumption that OF7 is representative of the discharge at OF13 (NPDES general storm water permit condition B.1.c).
Outfall 15	1200R monitoring from 1993 to 1996	Please provide current status of OF-15	OF15 is a functioning outfall draining Basin 15 located on the slip (See Drawing 1 in the updated Stormwater Pollution Control Plan). OF15 has not been sampled since 1996 based on the presumption that OF7 is representative of the discharge at OF10 (NPDES general storm water permit condition B.1.c).
Outfall 16	2002 1200Z permit for CalBag Metals. 1200R monitoring from 1993 to 1996.	Provide rationale for excluding OF-16 from the evaluation.	OF16 includes discharges from the CalBag Metals area which are subject to their storm water permit. The EBMP program is focused toward those outfalls the Schnitzer has sole control over.
Outfall 17	1200R and 1200Z monitoring from 1993 to 2002. Now marked as remnant.	Provide rationale for excluding OF-17 from the evaluation.	OF11 is a remnant of the shipyard drainage system and is no longer connected to any catch basins and does not discharge storm water. The 2002 monitoring sample is believed to have actually been collected from OF 16. It is not known what the data labeled "OF17" during 1993 to 1996 represents.
Outfall 19	No monitoring data	Provide information on lack of 1200Z monitoring data.	Monitoring data from OF20 is presumed to be representative of the discharge from OF19.





<div>Project: Burgard Industrial Park EBMP</div> <div>Date: Thu 3/20/03</div>		<div>Task</div> <div>Split</div> <div>Progress</div> <div>Milestone</div>	<div></div> <div></div> <div></div> <div></div>	<div>Summary</div> <div>Project Summary</div> <div>*Rolled Up Task</div> <div>*Rolled Up Split</div>	<div></div> <div></div> <div></div> <div></div>	<div>*Rolled Up Milestone </div> <div>*Rolled Up Progress </div> <div>External Tasks </div>
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BRIDGEWATER GROUP, INC.

## **Revised Groundwater Monitoring Plan Burgard Industrial Park**

TO: Alicia Voss/DEQ  
COPY: Mat Cusma/Schnitzer  
FROM: Ross Rieke/Bridgewater Group  
DATE: March 17, 2003

This memorandum presents the revised groundwater monitoring plan for the Burgard Industrial Park in Portland, Oregon. This plan is revised from the December 20, 2002, plan based on comments received from the Oregon Department of Environmental Quality (DEQ) in a letter dated February 25, 2003.

Seven groundwater monitoring wells were installed for the Phase I Remedial Investigation (RI) at the site. Chemical analysis of groundwater samples collected in early 2002 noted concentrations of organic compounds less than surface water quality criteria and concentrations of metals similar to regional background levels. The results of the Phase I RI are presented in a May 16, 2002, *Phase I Remedial Investigation Report*. In a letter dated October 17, 2002 and during a meeting on November 14, 2002, DEQ requested that Schnitzer perform periodic groundwater monitoring to confirm the groundwater conditions noted in the Phase I RI sampling.

The purpose of the groundwater monitoring program is to assess:

- Any seasonal trends in the relative groundwater elevations at the site and;
- Confirm the lack of concentrations of hazardous substances at concentrations greater than surface water quality criteria or regional background concentrations in wells near the Willamette River.

Following from these stated goals, the groundwater monitoring program will consist of two elements:

- Groundwater elevation measurements
- Groundwater sampling and analysis

Each of these elements is discussed below.

### **Groundwater Elevation Measurements**

Groundwater elevations will be determined in the seven groundwater monitoring wells installed for the Phase I RI to assess any seasonal trends in the relative groundwater elevations at the site. The depth to the groundwater in the wells will be measured using an electronic meter to a precision of 0.01 foot. The groundwater depth measurements will be performed in a shortest period as practicable to reduce the potential for rapidly changing river levels to affect the relative groundwater depths between wells measured at the start of



the sampling round and those measured at the end of the sampling round. The groundwater elevations will be determined based on the surveyed elevations of the wells as presented in the RI report. The Willamette River level in the Portland Harbor at the start and end of the sampling event will be noted from the US Army Corps of Engineers internet web site.

The groundwater elevations will be determined quarterly (every three months) starting in March 2003. This frequency will capture the typical wet weather/dry weather and high river/low river cycles.

### ***Groundwater Sampling and Analysis***

Groundwater samples will be collected from selected groundwater monitoring wells to confirm the lack of concentrations of hazardous substances at concentrations greater than surface water quality criteria or regional background concentrations in wells near the Willamette River. The specific wells that will be sampled and the analytes included in the laboratory analysis are based on the results of the RI groundwater sampling and analysis. Table 1 presents the wells to be sampled, the analysis to be performed, and the basis for their selection.



**TABLE 1**  
Groundwater Sampling and Analysis Program  
*Burgard Industrial Park*

Monitoring Well	Analytes	Basis - Phase I RI Results
MW-1	VOCs	VOC concentrations greater than surface water quality criteria.
	Total and Dissolved Sb, As, Ba, Cd, Cr, Cu, Pb, Hg, Ni, Zn	Total arsenic, chromium concentrations greater than water quality criteria in nearby wells.
MW-2	VOCs	In pathway from MW-1 to Willamette River. (No VOCs were detected at concentrations greater than surface water quality criteria in MW-2 during Phase I RI sampling.)
	Total and Dissolved Sb, As, Ba, Cd, Cr, Cu, Pb, Hg, Ni, Zn	Total arsenic, chromium concentrations greater than water quality criteria.
MW-3	Total and Dissolved Sb, As, Ba, Cd, Cr, Cu, Pb, Hg, Ni, Zn	Total arsenic, chromium concentrations greater than water quality criteria.
	SVOCs	As requested by DEQ, due to low concentration of 3-4, methylphenol.
MW-4	Total and Dissolved Sb, As, Ba, Cd, Cr, Cu, Pb, Hg, Ni, Zn	Total arsenic, chromium concentrations greater than water quality criteria.
MW-5	Total and Dissolved Sb, As, Ba, Cd, Cr, Cu, Pb, Hg, Ni, Zn	Total chromium concentrations greater than water quality criteria.
MW-7	VOCs	As requested by DEQ, due to low concentrations in Phase I sample and in samples from adjacent Northwest Pipe site.
	Total and Dissolved Sb, As, Ba, Cd, Cr, Cu, Pb, Hg, Ni, Zn	As requested by DEQ, due to total arsenic and chromium concentrations greater than water quality criteria.

The groundwater samples will be collected twice per year. Once during typical high groundwater/high river levels (March) and once during typical low groundwater/low river level (September or October). The groundwater samples will be collected using the same procedures and equipment, including field parameter measurements, used during the Phase I RI. The laboratory analysis methods will be the same as for the Phase I RI.

### ***Reporting and Assessment of Groundwater Monitoring Program***

A brief letter report will be prepared after each groundwater sampling round and results are received from the analytical laboratory (i.e. twice per year). Results from the two rounds of groundwater level measurements performed in the report period will be included in the report.



A report will be prepared after one year of groundwater monitoring presenting an assessment of the groundwater monitoring results and the appropriateness of additional groundwater monitoring. Results of the one year of groundwater monitoring will be assessed for the following:

- Groundwater flow directions and gradients consistent with the Phase I RI results.
- Contaminant concentrations in the two sampling rounds consistent with the concentrations measured in the Phase I RI.

If these two conditions are demonstrated by the one year of groundwater monitoring, the groundwater monitoring will be discontinued.

### ***Schedule***

The first round of groundwater level measurements and groundwater sampling is scheduled for March 23, 2003.

Please call if you have any questions.





BRIDGEWATER GROUP, INC.

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mieke@bridgeh2o.com

September 15, 2006

Mr. Dana Bayuk  
Oregon Department of Environmental Quality  
2020 SW Fourth Ave., Suite 400  
Portland, OR 97201-4987

Subject: Gunderson Property  
4250 NW Front Avenue

Over the past several years, Gunderson Inc. ("Gunderson") has submitted to the Oregon Department of Environmental Quality (DEQ) several documents describing the environmental conditions on the Area 3 portion of the Gunderson property at 4250 NW Front Avenue in Portland, Oregon (Site). These documents (herein referred to as "the documents") have included the following:

- *Environmental Site Assessment*, November 28, 1990. (ESA Report)
- *Preliminary Site Assessment and Remedial Investigation Proposal*, September 26, 2000. (PA Report)
- *Expanded Preliminary Site Assessment*, July 10, 2002. (XPA Report)
- *Status of Area 1, Area 2, and Area 3 Site Investigations and Source Control Work, and DEQ Comments on Submitted Documents, Letter from Dana Bayuk/DEQ to Max Miller/Tonkon Torp*, September 23, 2005. (Source Control Letter)
- *Focused Remedial Investigation and Preliminary Source Control Evaluation, Gunderson Area 3, Former Schnitzer Steel Yard*, June 2006. (PSCE Report)

On behalf of Schnitzer Steel Industries, Inc. and Schnitzer Investment Corp. (collectively, "Schnitzer"), Bridgewater Group, Inc. ("Bridgewater") has reviewed the documents and have noted numerous factual errors, misrepresentations and omissions pertaining to historic operations on the Site and Gunderson's operations. In this way, the documents unduly focus on historic operations as potential sources of contaminants, notwithstanding the fact that Gunderson has operated a heavy manufacturing facility on the Site for over 20 years. The documents also fail to recognize and/or sufficiently weigh other potential sources of contamination. As a result, the documents inaccurately present information regarding contaminant sources on the Site.

SCHN00271758



### **Site-Specific Contaminants of Potential Concern**

Heavy petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and metals are identified in the PSCE Report as exceeding the DEQ Joint Source control Strategy (JSCS) screening levels. Other than brief statements saying that Gunderson's use of the site has been limited to "material storage", the discussion of potential sources in the documents is focused on historical (pre-Gunderson) operations. This presentation ignores the other potential sources of the site contamination. These sources of petroleum hydrocarbons, PAHs, PCBs, and metals include the following:

#### **Petroleum Hydrocarbons and PAHs**

- A photograph in the ESA Report notes a pool of "oily liquid" in the northeast corner of the site near the top of the river bank. The pool was obviously from current operations.
- The ESA report notes "several visible discolored areas" and "several open drums with unknown contents" in Area 3. A photograph of leaking drums is provided in the ESA report.
- The ESA report notes that petroleum products have been used in the manufacture and refurbishing of railcars and in shipbuilding on the site.
- The XPA, PA, and ESA reports note Gunderson has maintained an uncontained drum storage area with drums containing process wastes, paints, solvents, and petroleum products. The ESA report notes that spills have occurred in this area.
- The XPA, PA, and ESA reports note a petroleum spill by Gunderson in 1991 in area 3D that resulted in concentrations greater than 40,000 m/kg of TPH in soils. There is apparently no documentation that this soil was removed.
- The PA and PSCE reports note that Gunderson removed two leaking diesel underground storage tanks (USTs) (3,000 and 5,000 gallons) from area 3C in 1991. About 500 CY of petroleum contaminated soil was removed from the UST excavation.
- As noted in the ESA, PA, and XPA reports, Army Corps of Engineers fill was placed on the site prior to original development of Area 3. Historical (i.e., 1940s-1960s), dredge material placed along the Willamette River banks has been found to contain petroleum hydrocarbons. For example, petroleum hydrocarbons have been measured at concentrations over 400 mg/kg in soil samples from throughout the upper 50 feet at the head of the Swan Island Lagoon where historical dredge spoils were placed.
- Storm water catch basin sediment samples collected in May and June 2003 noted PAHs in catch basins on all portions of the Gunderson site, including far distant from the historical operations in Area 3. PAHs were detected in all of the catch basins sampled in Areas 1 and 2, areas removed from historical operations in Area 3. The average PAH concentration in the Areas 1 and 2 catch basins was over two times greater than the average PAH concentration in the Area 3 catch basin samples. The concentrations of



PAHs in these catch basins reflect Gunderson's current operations and confirm them as a source of PAHs.

#### **PCBs**

- Gunderson has acknowledged in the XPA report the presence of two sets of PCB transformers (Vaults 14 and 15) serving Gunderson's operations (as of 2002) on the eastern portion of the site. Vault 13 was noted as non-PCB, but was noted as previously containing PCBs. Based on typical operations and practices, PCB oil has likely been spilled in the areas around the three transformer areas.
- The XPA report notes that PCBs were detected at 17 mg/kg in a sump sample associated with Area 2, which is an area not used for historical Area 3 operations. DEQ noted in their Source Control Letter that source control work is necessary in Area 2 due to high concentrations of PCBs. This presence of high concentrations of PCBs in an area associated with Gunderson's operations belies Gunderson's suggestions that PCBs on the site are associated only with historical practices.
- The ESA report notes that petroleum products containing PCBs may have been used in the manufacture and refurbishing of railcars and in shipbuilding on the site.
- Storm water catch basin sediment samples collected in May and June 2003 noted PCBs in catch basins on all portions of the Gunderson site, including far distant from the area of historical Area 3 operations. PCBs were detected in 14 of 16 catch basins sampled in Areas 1 and 2, areas removed from historical Area 3 operations. Clearly, PCBs present in these catch basins reflect Gunderson's current operations and confirm them as a source of PCBs. The relative concentrations of PCBs in the catch basin sediment samples from Areas 1 and 2 and Area 3 are similar excluding the relatively higher concentration in the sample from near Gunderson's PCB transformer.
- As noted in the ESA, PA, and XPA reports, Army Corps of Engineers fill was placed on the site prior to original development of Area 3. Historical (i.e., 1940s-1960s), dredge material placed along the Willamette River banks has been found to contain PCBs. For example, PCBs have been detected in soil samples from throughout the upper 60 feet at the head of the Swan Island Lagoon where historical dredge spoils were placed.

#### **Metals**

- Section 2.1 of the PA Report describes a "paint filter burnoff incinerator" that Gunderson operated in Subarea 3D. Although the report notes that Gunderson personnel state that "...this incinerator discharges no volatile emissions" (which in itself seems implausible), there is no mention of releases of lead that would have occurred from burning lead-based paints.
- The PA Report notes that "slag and sludge wastes" have been placed in the eastern portion of the site. The ESA Report noted "several disposal areas for slag from metal fabrication" in the southeastern portion of the site. Possible sources of the slag and sludge include Gunderson's torch cutting, grinding, and welding operations. Slag from



these operations would likely contain heavy metals such as arsenic and lead. No testing of the slag and sludge wastes appears to have been performed.

- As noted in the XPA, PA, and ESA reports, Gunderson has maintained a Drum Storage Area with drums containing paints, solvents, petroleum products and RCRA waste products. Lead is a component of marine paints.
- The ESA report notes that sand blasting material storage and use have occurred on the site during the Gunderson operations. Sand blast grit commonly contains high concentrations of lead, copper, and arsenic.
- As noted in the ESA, PA, and XPA reports, Army Corps of Engineers fill was placed on the site prior to original development of Area 3. Historical (i.e., 1940s-1960s), dredge material placed along the Willamette River banks has been found to contain elevated concentrations of lead. For example, elevated lead concentrations have been detected in soil samples from throughout the upper 30 feet at the head of the Swan Island Lagoon where historical dredge spoils were placed.
- Storm water catch basin sediment samples collected in May and June 2003 noted elevated lead concentrations in catch basins on all portions of the Gunderson site, including far distant from the area of historical Area 3 operations. Elevated lead was detected in all of the catch basins sampled in Areas 1 and 2, areas removed from historical Area 3 operations. The elevated lead concentrations in these catch basins reflect Gunderson's current operations and confirm them as a source of lead.

### **Potential Gunderson Releases and Other Issues**

Several facts presented in the various reports suggest that releases have occurred during the Gunderson operations. These facts belie Gunderson's focus on the historical operations as the sole source of contamination on the site. Examples of these "facts" include:

- Section 2.1 of the PA Report describes a "hazardous materials storage area" in Subarea 3D where solvents, paints, "process waste products", and hazardous wastes are stored. Section 3.2 notes that information on historical hazardous material management and disposal practices is not available. Section 5 of the PA Report notes that sampling and analysis at this feature has been "...confined to the remediation of two releases and an exploratory effort in the southern portion of the subarea." The "exploratory effort" noted petroleum hydrocarbons and lead in the shallow soil. Cleanup of spills in this area are not well documented and, for at least the March 1991 spill event, no confirmation samples were obtained after the reported soil removal. All of this discussion pertains only to reported spills.
- Tug maintenance operations occurred in the site area prior to placement of the dredge fill in the early 1960s. Such operations likely would have released petroleum hydrocarbons, metals, and PCBs (hydraulic oils, electrical equipment).
- Gunderson has been operating on the site for about 20 years compared to the duration of historical Area 3 operations (about 17 years). Given this similar period of operations



and the industrial nature of both company's operations, it is implausible to conclude that Gunderson has not contributed significantly to contamination present on the site.

- Catch basin sediment samples collected in 2003 noted PCBs and lead in catch basins in all areas of the site, not just the area of the historical Area 3 operations. Given that the catch basin sediments and the associated discharge to the Willamette River are representative of Gunderson's operations, it is clear that Gunderson is a current source of PCBs and lead and that PCBs and lead are not surrogates for contaminants associated with historical Area 3 operations.
- The consistent exceedance of storm water permit benchmarks demonstrates that *current* runoff from *current* operations are an *ongoing* source of contaminants to the river. Given that Gunderson has performed extensive regrading of the site and placed a gravel surface over most of the area, it is implausible that current runoff is affected by site operations 25 years ago.
- Gunderson has performed significant regrading and redevelopment of the site. Aerial photos from 1992 and 1980 clearly show significant site development in the area by Gunderson. Railroad tracks 24, 25, 26, and 27 were constructed by Gunderson and would have required significant earthwork and regrading. Such regrading, by its nature, would have moved around any pre-existing "hot spots" thus exacerbating any existing surface contamination. None of the reports describe how the excavated material was managed.
- Tables 20 through 28 in the XPA report claim that virtually no hazardous substances have been "Used, Generated, or Suspected" on any portion of Area 3. Although Gunderson acknowledges current use of PCBs in this area, they claim that no petroleum hydrocarbons or PAHs are "Used, Generated, or Suspected" except in a very small portion of the site. Given the ubiquitous nature of these substances on industrial sites and Gunderson's use of the site (e.g. petroleum product storage, rail car transport and storage), it is silly to claim that hazardous substances are not currently "Used, Generated, or Suspected" across the site.
- The XPA report claims there was a "battery pit" on the site and that wire burning was performed on the site. Gunderson does not provide specific references for these claims. Persons familiar with the historical operations on the Area 3 portion of the Site are not aware of any battery pit on the site. The few batteries that came into the site were kept on pallets and then sent to an off-site battery reclaimer.
- The XPA report notes that Gunderson has used cutting oils in their pipe cutting activities on the site. Although Gunderson claims that currently the cutting oils are amine-based solutions, cutting oils have historically contained PCBs.
- Section 3.6 of the PSCE Report states that American Ship Dismantlers was a "Schnitzer Company". It is not clear what is intended by this statement but implying that Schnitzer is liable for actions performed by American Ship Dismantlers suggests a legal opinion that is outside the scope of the PSCE Report.



Mr. Dana Bayuk  
Page 6  
September 15, 2006

Thank you for the opportunity to provide these comments regarding the Gunderson site documents. Please call if you have any questions.

Sincerely,

**BRIDGEWATER GROUP, INC.**

A handwritten signature in black ink, appearing to read 'D. Rieke', with a stylized flourish at the end.

Ross D. Rieke, P.E.  
Vice President  
Environmental Consultant

SCHN00271763





**EXTREMELY URGENT**

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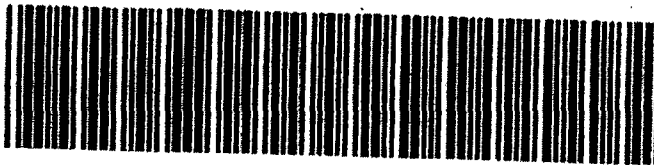
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 PORTLAND, OREGON 97208-2946

REPLY TO  
 ATTENTION OF:

August 25, 2003

Operations Division  
 Regulatory Branch  
 Corps No. 199100099

Mr. Philip Benavides  
 Port of Portland  
 Box 3529  
 Portland, Oregon 97208

Dear Mr. Benavides:

The U.S. Army Corps of Engineers (Corps) has received your request, dated August 22, 2003, to extend the public notice commenting period for Department of the Army permit application number 199100099 (Schnitzer Steel Industries-maintenance dredging) for a period of two weeks (Enclosure 1). The Corps has reviewed your request and agrees to extend the public notice commenting period until September 8, 2003.

If you have any questions regarding this application, please contact Ms. Mary J. Headley, Project Manager, at the letterhead address or telephone (503) 808-4392.

Sincerely,

*Mary Headley*  
 for Lawrence C. Evans  
 Chief, Regulatory Branch

Enclosure

Copy Furnished:

✓ Schnitzer Steel Industries (James Jakubiak), PO Box 10047, Portland, Oregon 97296-0047

Post-It™ brand fax transmittal memo 7671		# of pages ▶ 3
To <i>Jim Dragne</i>	From <i>Jim Jakubiak</i>	
Co. <i>Burns &amp; McDonnell</i>	Co. <i>Schnitzer</i>	
Dept.	Phone #	
Fax #	Fax #	

I-1204-355-0123

SCHN00271831



**RECEIVED**  
Bingham McCutchen, LLP

DEC - 6 2004

By \_\_\_\_\_

*[Handwritten signature]*

SCHN00271832





August 22, 2003

Robert Rose, Acting Branch Chief  
U.S. Army Corps of Engineers  
Northwestern Division, Portland District  
Robert Duncan Plaza  
333 S.W. First Ave.  
Portland, OR 97204-3495

**BY FACSIMILE**

Dear Mr. Rose:

I write pursuant to our conversation of this morning, to respectfully request an extension of the comment period in respect to Schnitzer Steel Industries, Inc. permit application for maintenance dredging of Berths 1, 2, and 3 at the International Terminals slip. To confirm, we spoke regarding this matter due to the absence from the office of the Project Manager for this matter and the Branch Chief, to whom a request for extension would ordinarily be made.

This extension is requested to allow the Port of Portland to provide comments in support of the public interest on this matter. The Port requests this extension to allow time for the review and internal circulation of permit file materials obtained as a result of my August 5, 2003 Freedom of Information Act request (attached) which was not fulfilled until August 21, 2003. (Cover letter attached, dated August 22.) The Freedom of Information Act mandates a request be answered within ten working days. Response was received from the Corps twelve working days later. This has prevented the Port from preparing comments in a timely fashion. To prepare comments, the Port will require two weeks. We ask that an extension be granted until September 8, 2003.

As discussed, the current practice of the Corps of Engineers is to fully review all materials present in the applicant's file at such time as a decision is made to grant or deny a permit. As such, the Port expects that comments it submits will be considered as part of the decision process, regardless of date of receipt, provided that comments are received prior to the date such decision is made, even if no extension is granted.

I kindly ask that either the Project Manager, Ms. Mary Headley, or an individual with the authority to grant or deny this extension contact me at his or her earliest convenience by telephone, at (503) 944-7302, with copy by mail to Port of Portland, P.O. Box 3529, Portland, OR 97208, if this extension cannot be granted. Otherwise, the Port will prepare and submit comments no later than 5 p.m. September 8, 2003.

Respectfully yours,

Philip Benavides  
Legal Department  
Port of Portland



**Ramsden, Jerald**

---

**From:** Mary.J.Headley@nwp01.usace.army.mil  
**Sent:** Friday, September 12, 2003 12:36 PM  
**To:** Ramsden, Jerald  
**Subject:** FW: Permit Application of Schnitzer Steel, USACE Action ID# 199100099

fyi—Original Message—

**From:** Benavides, Philip [mailto:benavp@portptld.com]  
**Sent:** Friday, September 05, 2003 4:19 PM  
**To:** 'Mary.j.headley@usace.army.mil'  
**Subject:** Permit Application of Schnitzer Steel, USACE Action ID# 199100099

Dear Ms. Headly:

I thank you on behalf of the Port for the opportunity to comment on the Permit Application of Schnitzer Steel for maintenance dredging of Berths 1, 2 and 3 at the International Terminals Slip. After having the time to review the application materials, the Port has no comment.

The Port will likely desire to comment on future maintenance dredging permit applications. We would like to set up an arrangement allowing the Port to forego the need to submit FOIA requests for applications put out for public comment. The delays inherent in the FOIA process undermine the need for quick review and comment. Do you have any suggestions?

Best regards,

Philip Benavides  
Legal Department  
Port of Portland  
Phone: 503-944-7302  
Fax: 503-548-5821  
benavp@portptld.com

9/12/2003

SCHN00271834



FILE COPY

James J. Dragna  
Direct Phone: (213) 680-6436  
Direct Fax: (213) 680-6499  
jim.dragna@bingham.com

August 4, 2006

Via U.S. Mail and E-Mail

Bingham McCutchen LLP  
Suite 4400  
355 South Grand Avenue  
Los Angeles, CA  
90071-3106

213.680.6400  
213.680.6499 fax

bingham.com

Boston  
Hartford  
London  
Los Angeles  
New York  
Orange County  
San Francisco  
Silicon Valley  
Tokyo  
Walnut Creek  
Washington

Kurt Burkholder  
Senior Assistant Attorney General  
Oregon Department of Justice  
1515 SW 5<sup>th</sup> Avenue, Suite 410  
Portland, OR 97201

**Re: Portland Harbor Superfund Site**

Dear Mr. Burkholder:

On behalf of our client Schnitzer Investment Corp. ("Schnitzer"), I write to respond to the July 25, 2006 letter from Dick Pedersen of the Department of Environmental Quality ("DEQ") regarding the Portland Harbor Superfund Site ("Site").

In his letter, Mr. Pedersen extends what he characterizes as a "second opportunity" for Schnitzer to participate in negotiations with DEQ regarding the Site. In fact, Schnitzer and other newly-noticed parties have been participating in good faith discussions with DEQ over the past few months. Despite the progress made in organizing these discussions among the numerous parties involved, DEQ declined repeated requests to extend the public comment period on its proposed consent judgment with the Lower Willamette Group ("LWG"). As a result, any hope of structuring a single settlement that included both the LWG and the newly-noticed parties was lost.

As noted in our letter of May 19, 2006, Schnitzer disputes DEQ's assertion that Schnitzer bears any liability for conditions at the Site. In addition, for the reasons stated in Schnitzer's August 1, 2006 comments on DEQ's proposed consent judgment with the LWG, Schnitzer cannot agree to enter into a settlement with DEQ that is identical to the LWG's proposed consent judgment. Nonetheless, Schnitzer continues to cooperate with DEQ in addressing certain site specific issues at its properties. In addition, Schnitzer also remains willing to continue its discussions with DEQ regarding a potential resolution of this matter, including a possible contribution toward certain of DEQ's alleged past and future costs.

In his letter, Mr. Pedersen indicates that DEQ has scheduled a negotiation session for next Thursday, August 10, 2006. We believe that this proposed date is somewhat premature. As you know, Schnitzer and the other newly-noticed parties have focused their efforts over the past few weeks on responding to the numerous and significant issues raised by DEQ's proposed consent judgment with the LWG. DEQ's decision to press forward on this unusual settlement on this timetable has distracted the parties from



Kurt Burkholder  
August 4, 2006  
Page 2

further settlement discussions, preventing any additional progress over the past few weeks. We therefore request that DEQ agree to defer the meeting for at least another week. This additional time will allow Schnitzer and the other newly-noticed parties to prepare for more substantive discussions, while still providing sufficient time to evaluate settlement options under the timetable proposed by DEQ. Should DEQ agree to this request, we commit to working with the other newly-noticed parties to quickly identify a date that is convenient for all parties involved.

Bingham McCutchen LLP  
bingham.com

We look forward to further discussions with DEQ. In the meantime, please let me know if DEQ is willing to revise the meeting schedule as requested.

Sincerely yours,



James J. Dragna

cc: Elizabeth McKenna, EPA



James J. Dragna  
Direct Phone: (213) 680-6436  
Direct Fax: (213) 680-6499  
jim.dragna@bingham.com

May 19, 2006

**Via U.S. Mail and E-Mail**

Bingham McCutchen LLP  
Suite 4400  
355 South Grand Avenue  
Los Angeles, CA  
90071-3106

213.680.6400  
213.680.6499 fax

bingham.com

Boston  
Hartford  
London  
Los Angeles  
New York  
Orange County  
San Francisco  
Silicon Valley  
Tokyo  
Walnut Creek  
Washington

Kurt Burkholder  
Senior Assistant Attorney General  
Oregon Department of Justice  
1515 SW 5<sup>th</sup> Avenue, Suite 410  
Portland, OR 97201

**Re: Portland Harbor Superfund Site**

Dear Mr. Burkholder:

On behalf of our client Schnitzer Investment Corp. ("Schnitzer"), I write to respond to the May 4, 2006 letter from Dick Pedersen of the Department of Environmental Quality ("DEQ") regarding the Portland Harbor matter.

In his letter, Mr. Pedersen asserted that Schnitzer has liability for costs incurred by DEQ in this matter based on Schnitzer's alleged status as a liable party for purported releases into Portland Harbor from six facilities. Mr. Pedersen requested that Schnitzer enter into settlement negotiations with DEQ and the Lower Willamette Group ("LWG") in this matter regarding the DEQ's alleged unreimbursed past costs and the environmental investigation currently being overseen by EPA.

Schnitzer does not share Mr. Pedersen's view that releases from Schnitzer properties contributed to the conditions in Portland Harbor or of Schnitzer's potential liability for DWQ's unreimbursed past costs. Nonetheless, Schnitzer has been cooperating with DEQ in addressing certain site-specific issues at its properties. For example, as you may be aware, Schnitzer has signed on to the DEQ's Voluntary Cleanup Program, and has incurred hundreds of thousands of dollars in investigative costs in this effort. Schnitzer is also working cooperatively with DEQ in implementing stormwater Best Management Practices and source control efforts. Schnitzer intends to continue this effort and to work collaboratively with DEQ with respect to conditions in Portland Harbor.

As noted in Mr. Pedersen's letter, Schnitzer has also received a letter from EPA regarding Portland Harbor, and from the LWG, inviting Schnitzer and other parties to attend a meeting scheduled for May 24, 2006. We understand that, during that meeting, the LWG will describe its plan for moving forward and its position on requirements for other parties to join in that effort. We further understand that representatives of EPA and DEQ will also participate in that meeting. Schnitzer has accepted the offer to attend and will consider the information provided in good faith. We will provide a more detailed response to the reimbursement request after this meeting.

SCHN00271837



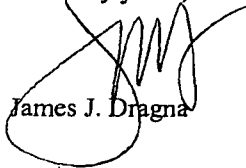
Kurt Burkholder  
May 19, 2006  
Page 2

In his letter, Mr. Pederson set a deadline of today, May 19, 2006, to respond to DEQ's offer to participate in a settlement. Since the informational meeting is not scheduled until next week, however, Schnitzer is not in a position at this time to decide whether it can join in any particular settlement. Nonetheless, Schnitzer remains committed to working in good faith with DEQ on a resolution of its demand for reimbursement that reflects fairly Schnitzer's alleged contribution to conditions in Portland Harbor and the costs incurred by DEQ.

Bingham McCutchen LLP  
bingham.com

We look forward to hearing DEQ's thoughts at the meeting next week and to our subsequent discussions on a potential resolution of this matter. In the meantime, please feel free to contact me if you would like to discuss this matter further.

Sincerely yours,



James J. Dragna

SCHN00271838



Kurt Burkholder  
May 19, 2006  
Page 3

bcc: Tom Zelenka  
Rich Josephson  
Mat Cusma  
Ross Rieke  
Allison Geiselbrecht  
Teri Floyd

Bingham McCutchen LLP  
bingham.com

SCHN00271839





# Oregon

Theodore R. Kulongoski, Governor

## Department of Environmental Quality

Northwest Region Portland Office

2020 SW 4<sup>th</sup> Avenue, Suite 400

Portland, OR 97201-4987

(503) 229-5263

FAX (503) 229-6945

TTY (503) 229-5471

May 4, 2006

OVERNIGHT MAIL

Kenneth M. Novack  
President  
Schnitzer Investment Corp.  
3200 NW Yeon Avenue  
Portland, OR 97296-0047

Re: Portland Harbor Superfund Site

Dear Mr. Novack:

As you may know, the U.S. Environmental Protection Agency ("EPA") is requesting that a number of potentially responsible parties ("PRPs") become cooperating parties in the in-water investigation of hazardous substance contamination in Portland Harbor by entering the existing administrative consent order with EPA, and is encouraging the PRPs to participate in the Lower Willamette Group ("LWG"). The LWG has requested that the Oregon Department of Environmental Quality ("DEQ") similarly provide an opportunity to LWG members and other PRPs to enter a state settlement recognizing in-water work performed under EPA's consent order.

You currently might be working with DEQ to investigate and control sources of contamination to the Willamette River from your upland facility. DEQ appreciates your cooperation and intends to maintain our constructive working relationship. Since DEQ is willing to discuss the settlement requested by the LWG regarding in-water work, and intends that any such settlement also provide for reimbursement of outstanding costs incurred by DEQ at Portland Harbor, DEQ is extending this opportunity to you and other PRPs to participate in negotiation of such a settlement.

This letter therefore serves to notify you of your potential liability for remedial action costs incurred by DEQ in connection with hazardous substance contamination of the Portland Harbor in Portland, Oregon, and provides you with DEQ's demand for payment of those costs. This letter further notifies you of an opportunity to enter negotiations with DEQ and other PRPs to settle your obligation to reimburse DEQ's costs and to become a cooperating party in the ongoing environmental investigation and study of cleanup remedies for the Portland Harbor contamination being overseen by EPA.

The DEQ negotiations will proceed on a short timeline. We therefore request that you give this matter your immediate attention, and, if you wish to participate in a settlement with DEQ, to please respond by May 19, 2006 in accordance with the instructions set out in this letter.

GENQ0258

1

SCHN00271848



### Background

Investigations of sediments and water quality in the Willamette River within the Portland Harbor area have revealed a broad range of hazardous substance contaminants, including but not limited to petroleum hydrocarbons, polycyclic aromatic hydrocarbons, polychlorinated biphenyls, pentachlorophenol, phthalates, dioxins and furans, DDT and other pesticides, and lead, arsenic, mercury, and other metals. These chemicals have entered the river through releases from upland properties, storm water, and upstream sources as a result of industrial, commercial, and shipping activities, urban and agricultural runoff, and sewer outfalls.

In response to this contamination, DEQ undertook a number of measures for the protection of public health and the environment, including but not limited to site discovery and assessment to locate sources of the contamination, development of a Portland Harbor Sediment Management Plan and Sediment Investigation Work Plan to guide investigation of the sediments contamination, consultation and negotiation with PRPs regarding the design and implementation of the plans, coordination with federal agencies and tribes having interests in the Willamette River, and the entry of cooperative agreements and public outreach necessary to these efforts. DEQ undertook these measures pursuant to its authorities under the state environmental cleanup law, ORS 465.200 *et seq.*, and consistent with Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA" or "Superfund").

On December 1, 2000, EPA placed the lower Willamette River and related sources of contamination to the river on the National Priority List pursuant to CERCLA. The final boundaries of the Portland Harbor Superfund Site will be established by EPA when it selects a final cleanup remedy for the site.

DEQ and EPA have agreed to share responsibility for investigation and cleanup of the Portland Harbor Superfund Site. DEQ is responsible for overseeing the investigation and control of contaminant sources to the harbor. EPA is responsible for overseeing the investigation and cleanup of in-water contamination. Each agency also acts as a support agency to the other agency's efforts. EPA is currently administering the performance of an in-water remedial investigation and feasibility study ("RI/FS"), under an Administrative Order on Consent issued by EPA on September 28, 2001. Ten PRPs are signatories to the consent order with EPA. Those consent order parties, along with a reported four other PRPs, have formed what is called the Lower Willamette Group for the purpose of jointly performing or financing the in-water RI/FS. EPA by separate letter dated April 28, 2006 has requested that other PRPs become cooperating parties by signing the consent order. EPA is also encouraging the PRPs to participate in the LWG.

### Your Potential Liability

Under the state environmental cleanup law, ORS 465.200 *et seq.*, the following persons may be liable for DEQ remedial action costs: an owner or operator of a facility at or during the time of acts or omissions that result in a release of hazardous substances at the facility; a subsequent owner or operator who knew or reasonably should have known of



the release when the person became the owner or operator; an owner or operator who obtains actual knowledge of the release and then transfers ownership or operation without disclosing such knowledge; a person who causes, contributes to, or exacerbates contamination; a person who unlawfully hinders or delays investigations and cleanup; a person who obtains actual knowledge of a release and fails to promptly notify DEQ and exercise due care; and a person who fails to take reasonable precautions against a third party's actions. See ORS 465.255. This liability may attach to past owners and operators as well as present. The liability generally is strict and joint and several. Similar liability for DEQ remedial action costs may exist under CERCLA. See 42 U.S.C. § 9607. Hazardous substances for which liability may exist under the state environmental cleanup law include CERCLA hazardous substances and oil. ORS 465.200(16).

Based on available information, DEQ has reason to believe that hazardous substances have been or are being released at or from the facility(s) located at 12005 N. Burgard Road; 6529 NW Front Avenue; 9333 N. Time Oil Road; 9449 N. Burgard Way; 3720 NW Yeon Avenue; and 4012-4350 NW Front Avenue, Portland, Oregon, to the Portland Harbor, and that you may be liable for DEQ's remedial action costs under one or more of the grounds enumerated above under the state environmental cleanup law and CERCLA.

The total amount of non-reimbursed past costs incurred by DEQ in connection with remedial activities at Portland Harbor through December 31, 2000 is \$1,902,171.31.<sup>1</sup> A summary of these costs is enclosed for you reference as Attachment A to this letter. Pursuant to ORS 465.200 *et seq.* and CERCLA, DEQ makes demand for payment by you of this amount plus all authorized interest.

#### Settlement Opportunity

As stated above, DEQ intends to commence settlement negotiations with PRPs regarding DEQ's remedial action costs at Portland Harbor and other matters. The settlement would be in the form of a consent judgment entered in state circuit court pursuant to ORS 465.325. The salient provisions of the consent judgment would require that signing PRPs: (a) pay DEQ's outstanding remedial action costs incurred through December 31, 2000; (b) reimburse DEQ's support agency costs under the in-water RI/FS consent order administered by EPA; and (c) perform the in-water RI/FS under the EPA consent order, as demonstrated by a PRP entering the consent order with EPA or otherwise demonstrating that it is helping to fund the RI/FS work (such as through membership in the LWG).

In return, DEQ would provide a covenant-not-to-sue, right of contribution, and contribution protection regarding the same matters.

<sup>1</sup> The EPA consent order requires reimbursement by PRP signatories to the consent order of costs incurred by DEQ as support agency after January 26, 2001. Generally consistent with that date and for ease of accounting, DEQ at this time is offering an opportunity to settle its outstanding costs incurred through December 31, 2000.



In addition to these benefits of entering a settlement with DEQ, there are advantages to joining the in-water RI/FS work, including a meaningful role in the development of the cleanup alternatives to be evaluated by EPA when it selects a final remedy for the Portland Harbor Superfund Site. Further, DEQ understands that the LWG is beginning the development of an allocation process among PRPs, in lieu of litigation, for determining shares of investigation and cleanup costs. Participating in this process and the LWG may be in your interest.

DEQ understands that the LWG has invited you and other PRPs to an informational meeting to discuss the LWG's activities to date and your potential participation in performing or funding the in-water RI/FS work. DEQ and EPA representatives intend to participate in portions of that meeting.

The DEQ consent judgment negotiations will proceed on a tight timeline. DEQ intends to complete negotiations so that a proposed consent judgment may be issued for public notice and comment this summer of 2006, and the consent judgment entered with the state circuit court by the fall of 2006. Consent judgment negotiations will be confidential, and, in accordance with ORS 465.325(4)(b), a PRP's participation in negotiations shall not be considered an admission of liability.

If you elect to participate in this settlement opportunity, please provide a written letter of your intent to engage in good faith negotiations, by May 19, 2006, mailed to: Kurt Burkholder, Senior Assistant Attorney General, Oregon Department of Justice, 1515 SW 5<sup>th</sup> Ave., Suite 410, Portland, OR 97201.

For your information, the mailing list enclosed with this letter as Attachment B shows the other PRPs receiving this notice of settlement opportunity from DEQ.

Questions regarding this letter may be directed to Mr. Burkholder at 971-673-1880, or at [kurt.burkholder@doj.state.or.us](mailto:kurt.burkholder@doj.state.or.us). If you have any questions regarding the EPA consent order, we suggest you contact Elizabeth McKenna at 206-553-0016. Questions regarding participation in the LWG may be directed to David Ashton at 503-944-7090, or William Joyce at 206-957-5951.

Thank you for your attention to this matter.

Sincerely,



Dick Pedersen  
Administrator  
Northwest Region

Encls





# Oregon

Theodore R. Kulongoski, Governor

## Department of Environmental Quality

Northwest Region Portland Office

2020 SW 4<sup>th</sup> Avenue, Suite 400

Portland, OR 97201-4987

(503) 229-5263

FAX (503) 229-6945

TTY (503) 229-5471

June 30, 2006

Jim Jakubiak  
Schnitzer Investment Corp.  
3200 NW Yeon Avenue,  
Portland, Oregon 97210

Re: Portland Harbor Stormwater Concerns

Dear Ms./Mr. Jakubiak:

In 2001, the Oregon Department of Environmental Quality (DEQ) entered into an agreement with the U.S. Environmental Protection Agency (EPA) that assigned DEQ the responsibility for controlling current and future upland discharges to the Portland Harbor superfund site. The purpose is to ensure these potential sources do not pose an unacceptable risk to aquatic organisms or to people and animals that consume fish from the harbor.

DEQ is currently working with upland parties to implement source control actions at sites in order to mitigate ongoing contamination to the river. Stormwater runoff from upland sites has been identified as one of the potential sources of contamination to the river. Evaluating and controlling discharges of contaminants via stormwater is an important consideration in source control and is required under DEQ's Environmental Cleanup authority. The process for controlling these sources is detailed in the EPA/DEQ Joint Source Control Strategy<sup>1</sup> (JSCS).

To implement this strategy, DEQ is currently working with many property owners to take immediate measures to ensure stormwater is adequately characterized and controlled to prevent contamination to the river. In many cases, this work will go beyond existing applicable discharge permit requirements<sup>2</sup> that may exist at a site.

When the Portland Harbor in-water RI/FS is completed, EPA will issue a Record of Decision (ROD). The ROD will describe the objectives and actions necessary to clean up the river. Sites that have not taken actions to implement stormwater control measures may be included in the ROD unless data exist demonstrating they are not a source of contamination to the Portland Harbor site.

Following cleanup efforts in Portland Harbor, river water and sediments will be monitored to ensure that those efforts were successful, and to identify any sources of contaminants that could contribute

<sup>1</sup> This document can be found at <http://www.deq.state.or.us/nwr/PortlandHarbor/JSCS.htm>.

<sup>2</sup> Some Portland Harbor sites are already operating under a stormwater permit which requires certain stormwater control measures. However, these permits do not address all of the contaminants that are most problematic in Portland Harbor and may not be sufficient to address the Portland Harbor cleanup goals. Additionally, some sites that are not currently operating under a stormwater permit may also be sources of contaminants to the river. These sites may need to implement additional stormwater control measures to prevent recontamination of harbor sediments.



# **Portland Harbor Superfund Site**

## **Stormwater Evaluation Workshops for Portland Harbor Cleanup Sites**

**WHEN:** July 17, 2006 1:30 – 4:30  
July 31, 2006 1:30 – 4:30  
*(Both workshops will cover the same material)*

**WHERE:** University Place Hotel at Portland State University  
310 SW Lincoln Street in Downtown Portland  
*(Across the street from DEQ's NW Region office)*

**WHAT:** Explanation of Stormwater Sampling Procedures

Background: DEQ is working with certain Portland Harbor-area properties to evaluate and control stormwater that is discharging contaminants of concern into the Willamette River. DEQ's approach to this work is described in Appendix D of the Portland Harbor Joint Source Control Strategy.<sup>1</sup> At many sites, this work is already underway or will be commencing this fall.

Purpose of the Workshops: DEQ is holding two free workshops for property owners and consultants to explain the procedures and answer any questions people may have. The workshop will begin with a presentation and Q&A session (60-90 minutes). Following that, staff will be available for 1-on-1 consultations.

Questions? Contact your DEQ Project Manager or Karen Tarnow at 503-229-5988



State of Oregon  
Department of  
Environmental  
Quality

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<sup>1</sup> This document can be found at <http://www.deq.state.or.us/nwr/PortlandHarbor/JSCS.htm>.





# CITY OF PORTLAND ENVIRONMENTAL SERVICES



Water Pollution Control Laboratory  
6543 N. Burlington Ave., Portland, Oregon 97203-5452  
(503) 823-5600

July 13, 2005

Mr. Jim Jakubiak  
Schnitzer Steel Industries, Inc.  
PO Box 10047  
Portland, OR 97296-0047

Subject: Stormwater Sampling Results

Dear Mr. Jakubiak:

As part of the Industrial Stormwater Program, City staff perform routine sampling at industries within the City of Portland that have general stormwater permits.

Enclosed are the results of a stormwater sample, collected on April 1, 2005, from your facility located on 12005 N Burgard. The samples were collected from monitoring points 03, 05, 06, and 20 which discharge into the Willamette River. Please note that the following parameters exceeded the benchmarks contained in your company's NPDES 1200-Z Stormwater Permit.

## SAMPLE LOCATION: 03

CONSTITUENT	RESULT	BENCHMARK
Chemical oxygen demand (COD)	820 mg/l	n/a
Total Suspended Solids (TSS)	216 mg/l	130 mg/l
Copper	0.343 mg/l	0.1 mg/l
Lead	0.791 mg/l	0.4 mg/l
Zinc	4.1 mg/l	0.6 mg/l

## SAMPLE LOCATION: 05

CONSTITUENT	RESULT	BENCHMARK
Total Suspended Solids (TSS)	132 mg/l	130 mg/l
Copper	0.183 mg/l	0.1 mg/l
Lead	0.42 mg/l	0.4 mg/l
Zinc	1.47 mg/l	0.6 mg/l

## SAMPLE LOCATION: 06

CONSTITUENT	RESULT	BENCHMARK
Oil & Grease	24.1 mg/l	10 mg/l

SCHN00271855



When benchmarks are not achieved, Schedule A(8) of the permit requires the Permittee to review their Storm Water Pollution Control Plan within sixty (60) days of receiving sample results. Results of this review are to be submitted to DEQ and the City in accordance with Schedule B(3). Please note that sampling conducted by the City may not be used to satisfy your permit-required self-monitoring.

The City collects additional samples for COD analysis as a screening process to evaluate whether or not other pollutant sources may be present that would not be detected through the standard 1200-Z permit suite of parameters. Please note that COD at sample point 03 was much higher than COD at the other three sample points. COD is a measurement of the amount of oxygen that can be oxidized by organic and inorganic compounds in a sample. Thus, it may represent a broad range of potential pollutants such as organic materials, chemicals, dissolved solids, etc. As part of your SWPCP review, you should also evaluate the drainage basin above sample point 03 to identify potential sources of elevated COD in stormwater.

If you have any questions regarding this letter, please feel free to contact me at 503-823-7383. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'ABW', with a horizontal line extending to the right.

Aaron B. Wieting, R.G., C.H.M.M.  
Environmental Technician  
Industrial Stormwater Program

Enclosures

SCHN00271856





City of Portland  
Water Pollution Control Laboratory  
Laboratory Analysis Report



Sample Date/Time 04/01/05 9:15

System ID AJ02928

Sample ID SWM050005

Proj./Company Name: SCHNITZER STEEL INTERNATIONAL  
Address/Location: 12005 N BURGARD

Page No.: 1  
Date Received: 04/01/05

Sample Status: COMPLETE AND  
VALIDATED

Proj Subcategory: INDUSTRIAL STORMWATER SAMPLING  
Sample Point Code: 03  
IMS File # / LCODE: 3060.001 SCHNITZSW

Sample Type: GRAB  
Sample Matrix: STORMWTR  
Collected By: ABW

Comments:

Test Parameter	Result	Units	MRL	Method
FIELD				
pH (FIELD)	7.3	pH Units	0.1	SM 4500-H B
GENERAL				
COD	820	mg/L	5	SM 5220 D
OIL & GREASE, TOTAL	5.1	mg/L	5	EPA 1664
TOTAL SUSPENDED SOLIDS	216	mg/L	2	SM 2540 D
METALS BY ICP-MS (TOTAL) - 3				
COPPER	0.343	mg/L	0.0002	EPA 200.8
LEAD	0.791	mg/L	0.0001	EPA 200.8
ZINC	4.10	mg/L	0.0005	EPA 200.8
OUTSIDE				
MERCURY	0.00189	mg/L	0.000500	EPA 1631

End of Report for Sample ID: SWM050005





City of Portland  
Water Pollution Control Laboratory  
Laboratory Analysis Report



Sample Date/Time 04/01/05 9:05 System ID AJ02927 Sample ID SWM050004

Proj./Company Name: SCHNITZER STEEL INTERNATIONAL  
Address/Location: 12005 N BURGARD

Page No.: 1  
Date Received: 04/01/05

Sample Status: COMPLETE AND  
VALIDATED

Proj Subcategory: INDUSTRIAL STORMWATER SAMPLING  
Sample Point Code: 05  
IMS File # / LCODE: 3060.001 SCHNITZSW

Sample Type: GRAB  
Sample Matrix: STORMWTR  
Collected By: ABW

Comments:

Test Parameter	Result	Units	MRL	Method
FIELD				
pH (FIELD)	7.2	pH Units	0.1	SM 4500-H B
GENERAL				
COD	88	mg/L	5	SM 5220 D
OIL & GREASE, TOTAL	5.1	mg/L	5	EPA 1664
TOTAL SUSPENDED SOLIDS	132	mg/L	2	SM 2540 D
METALS BY ICP-MS (TOTAL) - 3				
COPPER	0.183	mg/L	0.0002	EPA 200.8
LEAD	0.420	mg/L	0.0001	EPA 200.8
ZINC	1.47	mg/L	0.0005	EPA 200.8
OUTSIDE				
MERCURY	0.000831	mg/L	0.000100	EPA 1631

End of Report for Sample ID: SWM050004





City of Portland  
Water Pollution Control Laboratory  
Laboratory Analysis Report



Sample Date/Time 04/01/05 8:50 System ID AJ02926 Sample ID SWM050003

Proj./Company Name: SCHNITZER STEEL INTERNATIONAL  
Address/Location: 12005 N BURGARD

Page No.: 1  
Date Received: 04/01/05  
Sample Status: COMPLETE AND  
VALIDATED

Proj Subcategory: INDUSTRIAL STORMWATER SAMPLING  
Sample Point Code: 06  
IMS File # / LCODE: 3060.001 SCHNITZSW

Sample Type: GRAB  
Sample Matrix: STORMWTR  
Collected By: ABW

Comments:

Test Parameter	Result	Units	MRL	Method
FIELD				
pH (FIELD)	6.3	pH Units	0.1	SM 4500-H B
GENERAL				
COD	<5	mg/L	5	SM 5220 D
OIL & GREASE, TOTAL	24.1	mg/L	5	EPA 1664
TOTAL SUSPENDED SOLIDS	8	mg/L	2	SM 2540 D
METALS BY ICP-MS (TOTAL) - 3				
COPPER	0.0104	mg/L	0.0002	EPA 200.8
LEAD	0.0220	mg/L	0.0001	EPA 200.8
ZINC	0.0594	mg/L	0.0005	EPA 200.8
OUTSIDE				
MERCURY	0.0000386	mg/L	0.000005	EPA 1631

End of Report for Sample ID: SWM050003





City of Portland  
Water Pollution Control Laboratory  
Laboratory Analysis Report



Sample Date/Time 04/01/05 9:30

System ID AJ02929

Sample ID SWM050006

Proj./Company Name: SCHNITZER STEEL INTERNATIONAL  
Address/Location: 12005 N BURGARD

Page No.: 1  
Date Received: 04/01/05

Sample Status: COMPLETE AND  
VALIDATED

Proj Subcategory: INDUSTRIAL STORMWATER SAMPLING  
Sample Point Code: 20  
IMS File # / LCODE: 3060.001 SCHNITZSW

Sample Type: GRAB  
Sample Matrix: STORMWTR  
Collected By: ABW

Comments:

Test Parameter	Result	Units	MRL	Method
FIELD				
pH (FIELD)	6.3	pH Units	0.1	SM 4500-H B
GENERAL				
COD	38	mg/L	5	SM 5220 D
OIL & GREASE, TOTAL	5.3	mg/L	5	EPA 1664
TOTAL SUSPENDED SOLIDS	44	mg/L	2	SM 2540 D
METALS BY ICP-MS (TOTAL) - 3				
COPPER	0.0383	mg/L	0.0002	EPA 200.8
LEAD	0.0555	mg/L	0.0001	EPA 200.8
ZINC	0.264	mg/L	0.0005	EPA 200.8
OUTSIDE				
MERCURY	0.0000833	mg/L	0.000005	EPA 1631

End of Report for Sample ID: SWM050006



**SCHNITZER STEEL PRODUCTS CO.**

12005 N Burgard Road, Portland, Oregon 97203  
P.O. Box 10047, Portland, Oregon 97296-0047  
(503) 224-9900 FAX (503) 286-6948

July 11, 2005

Mr. Dennis Jurries  
Oregon Department of Environmental Quality  
2020 SW Fourth Avenue, Suite 400  
Portland, Oregon 97201-4987

Re: Storm Water Monitoring Results for 2004-2005 Permit #1200-Z, File #108103

Dear Mr. Jurries:

The tabulated storm water analytical data for the Schnitzer Steel Product's Co.'s facility located at 12005 North Burgard Road in Portland is attached. During the past year Schnitzer Steel collected stormwater samples from outfalls on December 13, 2005 and March 26, 2005. Results of the laboratory analyses are summarized in Table 1 and provided in attached laboratory reports.

We continue to implement Best Management Practices (BMPs) as outlined in our updated Stormwater Pollution Control Plan. Schnitzer continues to improve and enhance maintenance of existing treatment systems. We also evaluate new BMPs and storm water treatment technologies that are developed for possible inclusion and adoption into our overall site stormwater program.

Please contact me at (503) 286-6976 if you have questions.

Sincerely,  
Schnitzer Steel Products Co.

Jim Jakubiak  
Environmental Administrator

Attachments: Discharge Monitoring Report  
Laboratory Reports



**Table 1**  
**Storm Water Sampling Results**  
**Schnitzer Steel Products Co.**  
**Portland, Oregon**

Outfall	Date	Laboratory Results					
		pH	TSS	TPH	Copper	Lead	Zinc
1	12/13/2004	7.29	280	11.2	0.20	0.691	2.2
	3/26/2005	7.02	4.0	3.7	0.063	0.114	0.58
3	12/13/2004	7.21	130	9.6	0.23	0.398	2.3
	3/26/2005	6.81	12	ND	0.066	0.119	0.61
4	12/13/2004	6.76	48	3.1	0.12	0.210	0.49
	3/26/2005	7.13	21	ND	0.055	0.084	0.90
5	12/13/2004	7.05	100	4.4	0.17	0.401	0.92
	3/26/2005	7.01	60	ND	0.093	0.217	0.59
6	12/13/2004	7.55	14	ND	0.023	0.040	0.10
	3/26/2005	7.58	26	ND	0.008	0.019	0.034
14	12/13/2004	7.71	15	2.4	0.037	0.066	0.19
15	3/26/2005	8.10	34	6.0	0.058	0.086	0.17
16	12/13/2004	7.45	12	2.0	0.033	0.019	0.20
	3/26/2005	7.93	5.0	ND	0.026	0.054	0.29
20	12/13/2004	7.38	18	ND	0.009	ND	0.028
	3/26/2005	7.92	8.0	ND	0.019	0.027	0.29
Notes: All analytical results reported in mg/L (ppm) except pH which is reported in SU units. pH data collected in the field. ND - Not detected. NA - Not analyzed. No floating solids or oil and grease sheen were noted during monthly monitoring.							





NPDES 1200-Z General Permit for Storm Water Runoff  
Discharge Monitoring Report

Complete report and send  
once a year by July 15 to:  
Oregon DEQ

Legal Name: Schnitzer Steel Products Co.

Site/File ID #: 108103

Common Name: SCHNITZER STEEL

County: Washington

Facility Location: 12005 N. Burgard Road  
Portland, OR. 97203

Reporting period: July 1,  
2004 to June 30, 2005

Twice a Year Sampling

Monitor for the following pollutants at the monitoring points specified in your  
Storm Water Pollution Control Plan (SWPCP). Add more sheets if you have  
more than three monitoring points.

(See Attached Table)

Pollutant Sample 2/Year, Each Monitoring Point	Date of Sample	Monitoring Points		
		1	2	3
Total copper – If value exceeds 0.1 mg/l, review/revision of SWPCP required				
Total lead – If value exceeds 0.4 mg/l, review/revision of SWPCP required				
Total zinc – If value exceeds 0.6 mg/l, review/revision of SWPCP required				
pH – If value is outside of 5.5 to 9.0 S.U., review/revision of SWPCP required <sup>2</sup>				
Total suspended solids – If value exceeds 130 mg/l, review/revision of SWPCP required <sup>2</sup>				
Oil and grease – If value exceeds 10 mg/l, review/revision of SWPCP required <sup>2</sup>				
E. coli – If value exceeds 406 counts/100 ml, review/revision of SWPCP required. Only applies to landfills accepting septage/biosolids and sewage treatment plants.				

See reverse side for additional visual monitoring and signature for report.

<sup>1</sup>Monitoring frequency may be reduced under some circumstances – refer to page 10 of your permit. If monitoring requirements have been waived, please write in "WAIVED" for that pollutant.

<sup>2</sup>Separate effluent limits for these pollutants apply for coal fired power plants, cement plants, and/or roofing or asphalt paving operations.

SCHN00271863



## Monthly Visual Observations

Parameter and Requirements	Monitoring #		Monitoring #		Monitoring #	
	Sample Date	Results	Sample Date	Results	Sample Date	Results
<b>Oil and Grease Sheen</b> - No visible sheen allowed. Monthly observation when discharging. For months when no discharges occur, please write in "No Discharge" for that month.						
January	1/17/2005	No Sheen				
February	2/13/2005	No Sheen				
March	3/16/2005	No Sheen				
April	4/19/2005	No Sheen				
May	5/23/2005	No Sheen				
June	6/15/2005	No Sheen				
July	7/12/2004	No Sheen				
August	8/16/2004	No Sheen				
September	9/16/2004	No Sheen				
October	10/13/2004	No Sheen				
November	11/18/2004	No Sheen				
December	12/13/2004	No Sheen				
<b>Floating Solids</b> (associated with industrial activities) - No visible discharge allowed. Monthly observation when discharging. For months when no discharges occur, please write in "No Discharge" for that month.						
January	1/17/2005	No Solids				
February	2/13/2005	No Solids				
March	3/16/2005	No Solids				
April	4/19/2005	No Solids				
May	5/23/2005	No Solids				
June	6/15/2005	No Solids				
July	7/12/2004	No Solids				
August	8/16/2004	No Solids				
September	9/16/2004	No Solids				
October	10/13/2004	No Solids				
November	11/18/2004	No Solids				
December	12/13/2004	No Solids				

**Note - If there are any monitored results that exceed the benchmark values, you must review and revise as necessary your SWPCP within 60 days of exceeding the benchmark. SWPCP revisions must be submitted to DEQ within 14 days of completion.**

### Signature Requirement

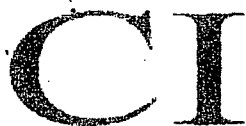
I certify, under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature of Responsible Official: \_\_\_\_\_

Name and Title (Please Print): Jim Goodrich

Date of Signature: 7-12-05 Telephone: 503-224-9000





# CERTIFICATE OF ANALYSIS

CLIENT: Schnitzer Steel  
ATTN: James Jakubiak  
P.O. BOX 10047  
Portland OR, 97296

PROJECT NAME: 1200Z Stormwater Test

PHONE: (503) 286-6976

FAX: (503) 286-6948

SUBMITTED: 12/14/04 15:39

REPORT DATE: 12/30/04 15:30

REPORT NUMBER: 4121411

PAGE: 1 OF 2

CI SAMPLE	CLIENTS ID#	DATE	TIME	MATRIX
4121411-01	Stormwater #1	12/13/2004	1800	Water
4121411-02	Stormwater #3	12/13/2004	1820	Water
4121411-03	Stormwater #4	12/13/2004	1830	Water
4121411-04	Stormwater #5	12/13/2004	1840	Water
4121411-05	Stormwater #6	12/13/2004	1850	Water
4121411-06	Stormwater #14	12/13/2004	1910	Water
4121411-07	Stormwater #16	12/13/2004	1925	Water
4121411-08	Stormwater #20	12/13/2004	1945	Water

SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	DETECTION LIMIT	TECH	DATE/TIME
<b>4121411-01 SAMPLE ID: Stormwater #1</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	11.2	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	280	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.20	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	0.691	mg/L	0.005	BKB	12/17/2004 14:17
ZINC - ICP		ZINC	2.2	mg/L	0.003	BKB	12/17/2004 14:17
<b>4121411-02 SAMPLE ID: Stormwater #3</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	9.6	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	130	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.23	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	0.398	mg/L	0.005	BKB	12/17/2004 14:17
ZINC - ICP		ZINC	2.3	mg/L	0.003	BKB	12/17/2004 14:17
<b>4121411-03 SAMPLE ID: Stormwater #4</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	3.1	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	48	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.12	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	0.210	mg/L	0.005	BKB	12/17/2004 14:17
ZINC - ICP		ZINC	0.49	mg/L	0.003	BKB	12/17/2004 14:17
<b>4121411-04 SAMPLE ID: Stormwater #5</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	4.4	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	100	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.17	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	0.401	mg/L	0.005	BKB	12/17/2004 14:17

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Authorized for Release By:

Richard D. Reid - Laboratory Director

COLUMBIA INSPECTION, INC 7133 N. Lombard, Portland, OR 97203 Phone: (503) 286-9464 Fax: (503) 286-5355 E-mail: lab@ColumbiaInspection.com

SCHN00271865





# CERTIFICATE OF ANALYSIS

REPORT DATE: 12/30/04 15:30

REPORT NUMBER: 4121411

PAGE: 2 OF 2

SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	DETECTION LIMIT	TECH	DATE/TIME
<b>4121411-04 SAMPLE ID: Stormwater #5</b>							
Total Metals by Inductively Coupled Plasma							
ZINC - ICP	EPA 200.7/6010B	ZINC	0.92	mg/L	0.003	BKB	12/17/2004 14:17
<b>4121411-05 SAMPLE ID: Stormwater #6</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1684		TOTAL OIL AND GREASE	ND	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	14	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.023	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	0.040	mg/L	0.005	BKB	12/17/2004 14:17
ZINC - ICP		ZINC	0.10	mg/L	0.003	BKB	12/17/2004 14:17
<b>4121411-06 SAMPLE ID: Stormwater #14</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1684		TOTAL OIL AND GREASE	2.4	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	15	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.037	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	0.066	mg/L	0.005	BKB	12/17/2004 14:17
ZINC - ICP		ZINC	0.19	mg/L	0.003	BKB	12/17/2004 14:17
<b>4121411-07 SAMPLE ID: Stormwater #18</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1684		TOTAL OIL AND GREASE	2.0	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	12	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.033	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	0.018	mg/L	0.005	BKB	12/17/2004 14:17
ZINC - ICP		ZINC	0.20	mg/L	0.003	BKB	12/17/2004 14:17
<b>4121411-08 SAMPLE ID: Stormwater #20</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1684		TOTAL OIL AND GREASE	ND	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	18	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.009	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	ND	mg/L	0.005	BKB	12/17/2004 14:17
ZINC - ICP		ZINC	0.028	mg/L	0.003	BKB	12/17/2004 14:17

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Authorized for Release By: Richard D. Reid - Laboratory Director





## NON-COMMERCIAL BILL OF LADING

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**Ph: (310) 833-1557 Fax: (310) 833-1585**

[illegible]

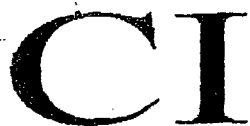
Relinquished By: 	Date/Time 12/14/04 1539	Received By: 	Date/Time 12/14/04 1539
Relinquished By:	Date/Time	Received By:	Date/Time

**FOR LABORATORY USE ONLY**

Inspection Job Number: _____	PO# _____
Laboratory Project Number: _____	Cash/check # _____
Due Date: _____	Amount Paid: \$ _____

SCHN00271867





# CERTIFICATE OF ANALYSIS

CLIENT: Schnitzer Steel  
ATTN: James Jakubiak  
P.O. BOX 10047  
Portland OR, 97296

PROJECT NAME: 1200Z Stormwater Test

PHONE: (503) 286-6976  
FAX: (503) 286-6948

SUBMITTED: 03/31/05 12:15

REPORT DATE: 04/11/05 15:12

REPORT NUMBER: 5033110

PAGE: 1 OF 2

CI SAMPLE	CLIENTS ID#	DATE	TIME	MATRIX
5033110-01	Stormwater #1	03/28/2005	0830	Water
5033110-02	Stormwater #3	03/28/2005	0835	Water
5033110-03	Stormwater #4	03/28/2005	0842	Water
5033110-04	Stormwater #5	03/28/2005	0848	Water
5033110-05	Stormwater #6	03/28/2005	0848	Water
5033110-08	Stormwater #15	03/28/2005	0858	Water
5033110-07	Stormwater #16	03/28/2005	0846	Water
5033110-08	Stormwater #20	03/28/2005	0838	Water

ORIGINAL

SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	DETECTION LIMIT	TECH	DATE/TIME
5033110-01 SAMPLE ID: Stormwater #1							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	3.7	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	4.0	mg/L	1.5	MRP	04/01/2005 12:42
Total Metals by Inductively Coupled Plasma							
COPPER - ICP EPA 200.7/6010B		COPPER	0.063	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.114	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.58	mg/L	0.003	BKB	04/01/2005 14:33
5033110-02 SAMPLE ID: Stormwater #3							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	ND	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	12	mg/L	1.5	MRP	04/01/2005 12:42
Total Metals by Inductively Coupled Plasma							
COPPER - ICP EPA 200.7/6010B		COPPER	0.066	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.119	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.61	mg/L	0.003	BKB	04/01/2005 14:33
5033110-03 SAMPLE ID: Stormwater #4							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	ND	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	21	mg/L	1.5	MRP	04/01/2005 12:42
Total Metals by Inductively Coupled Plasma							
COPPER - ICP EPA 200.7/6010B		COPPER	0.055	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.084	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.90	mg/L	0.003	BKB	04/01/2005 14:33
5033110-04 SAMPLE ID: Stormwater #5							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	ND	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	60	mg/L	1.5	MRP	04/01/2005 12:42

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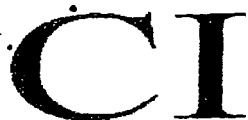
Authorized for Release By:

Richard D. Reid - Laboratory Director

COLUMBIA INSPECTION, INC 7133 N. Lombard, Portland, OR 97203 Phone:(503) 286-9464 Fax:(503) 286-5355 E-mail:lab@ColumbiaInspection.com

SCHN00271868





# CERTIFICATE OF ANALYSIS

REPORT DATE: 04/11/05 15:12

REPORT NUMBER: 5033110

PAGE: 2 OF 2

SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	DETECTION LIMIT	TECH	DATE/TIME
<b>5033110-04</b> SAMPLE ID: Stormwater #5							
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.093	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.217	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.59	mg/L	0.003	BKB	04/01/2005 14:33
<b>5033110-05</b> SAMPLE ID: Stormwater #6							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1684		TOTAL OIL AND GREASE	ND	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	26	mg/L	1.5	MRP	04/01/2005 12:42
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.008	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.019	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.034	mg/L	0.003	BKB	04/01/2005 14:33
<b>5033110-06</b> SAMPLE ID: Stormwater #15							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1684		TOTAL OIL AND GREASE	6.0	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	34	mg/L	1.5	MRP	04/01/2005 12:42
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.058	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.086	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.17	mg/L	0.003	BKB	04/01/2005 14:33
<b>5033110-07</b> SAMPLE ID: Stormwater #16							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1684		TOTAL OIL AND GREASE	ND	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	5.0	mg/L	1.5	MRP	04/01/2005 12:42
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.026	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.054	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.29	mg/L	0.003	BKB	04/01/2005 14:33
<b>5033110-08</b> SAMPLE ID: Stormwater #20							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1684		TOTAL OIL AND GREASE	ND	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	8.0	mg/L	1.5	MRP	04/01/2005 12:42
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.019	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.027	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.29	mg/L	0.003	BKB	04/01/2005 14:33

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SCHN00271869



## NON-COMMERCIAL BILL OF LADING

☐ 797 Channel Street, San Pedro, CA 90731

**Ph: (310) 833-1557 Fax: (310) 833-1585**

[illegible]SCHN00271870



Transmittal

To: Aaron Wieting, City of Portland

From: Jim Jakubiak

94

Date: 7/12/2005

Re: Annual Storm Water Monitoring Data

CC: Mat Cusma, Tom Zelenka

☐ Urgent

☒ For Use

☐ Please Comment

☐ Please Reply

☐ Please Recycle

Attached is a copy of the 2004 and 2005 stormwater monitoring data for Schnitzer Steel's facility in Portland, Oregon. Included in the submittal are the monitoring results and the Monitoring Report Form. Please contact me at (503) 286-6976 if you have questions or comments.

SCHN00271871





INDUSTRIAL STORMWATER  
NPDES 1200-Z MONITORING REPORT



Industry Name: **SCHNITZER STEEL INTERNATIONAL**

Site Address: **12005 N BURGARD RD, PORTLAND, OR**

The permittee shall monitor stormwater **twice** per year for the parameters outlined in their NPDES 1200-Z Stormwater Discharge Permit Schedule B.1.a., and submit results to the City as stated in Schedule D.2.

Stormwater samples were taken for the above permittee, on these days and at these sample points:

Sample Date(s)	Sample Point(s)
December 13, 2004	Outfalls 1, 3, 4, 5, 6, 14, 16, 20
March 26, 2005	Outfalls 1, 3, 4, 5, 6, 15, 16, 20

The permittee shall submit by **July 15** of each year a copy of the **laboratory analysis reports**, which show analytical methods and detection limits, for stormwater samples collected for the previous monitoring year (July 1-June 30).

☐ **Monitoring Waiver Reduction Notification:**

Check the box if your facility is exercising a waiver of monitoring based on meeting benchmarks listed in Schedule A.9., AND site conditions have not changed to impact stormwater run-off. Note: This does not exclude your facility from notifying DEQ about the waiver of monitoring. Please read Schedule B of the permit to clearly understand the monitor waiver reduction guidelines. If waiver request is for select pollutants, list the parameters excluded from monitoring: \_\_\_\_\_

☐ **No Exposure Certification:**

Check the box if your facility is required to have a NPDES 1200-Z permit, but monitoring is not required due to no exposure of stormwater to industrial activities. This no exposure certification is outlined in Schedule B.3.b, and the facility meets the requirements of Schedule B.1.e. Note: This does not exclude your facility from notifying DEQ.

I certify, under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: \_\_\_\_\_

*J. J. J. J.*

Title: \_\_\_\_\_

*Environmental Administrator*

Date: \_\_\_\_\_

*July 12, 2005*

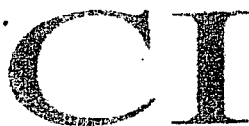
SCHN00271872



**Table 1**  
**Storm Water Sampling Results**  
**Schnitzer Steel Products Co.**  
**Portland, Oregon**

Outfall	Date	Laboratory Results					
		pH	TSS	TPH	Copper	Lead	Zinc
1	12/13/2004	7.29	280	11.2	0.20	0.691	2.2
	3/26/2005	7.02	4.0	3.7	0.063	0.114	0.58
3	12/13/2004	7.21	130	9.6	0.23	0.398	2.3
	3/26/2005	6.81	12	ND	0.066	0.119	0.61
4	12/13/2004	6.76	48	3.1	0.12	0.210	0.49
	3/26/2005	7.13	21	ND	0.055	0.084	0.90
5	12/13/2004	7.05	100	4.4	0.17	0.401	0.92
	3/26/2005	7.01	60	ND	0.093	0.217	0.59
6	12/13/2004	7.55	14	ND	0.023	0.040	0.10
	3/26/2005	7.58	26	ND	0.008	0.019	0.034
14	12/13/2004	7.71	15	2.4	0.037	0.066	0.19
15	3/26/2005	8.10	34	6.0	0.058	0.086	0.17
16	12/13/2004	7.45	12	2.0	0.033	0.019	0.20
	3/26/2005	7.93	5.0	ND	0.026	0.054	0.29
20	12/13/2004	7.38	18	ND	0.009	ND	0.028
	3/26/2005	7.92	8.0	ND	0.019	0.027	0.29
Notes: All analytical results reported in mg/L (ppm) except pH which is reported in SU units. pH data collected in the field. ND - Not detected. NA - Not analyzed. No floating solids or oil and grease sheen were noted during monthly monitoring.							





# CERTIFICATE OF ANALYSIS

CLIENT: Schnitzer Steel  
ATTN: James Jakubiak  
P.O. BOX 10047  
Portland OR, 97296

PROJECT NAME: 1200Z Stormwater Test

PHONE: (503) 286-6976  
FAX: (503) 286-6948

SUBMITTED: 12/14/04 15:39

REPORT DATE: 12/30/04 15:30

REPORT NUMBER: 4121411

PAGE: 1 OF 2

CI SAMPLE	CLIENTS ID#	DATE	TIME	MATRIX
4121411-01	Stormwater #1	12/13/2004	1800	Water
4121411-02	Stormwater #3	12/13/2004	1820	Water
4121411-03	Stormwater #4	12/13/2004	1830	Water
4121411-04	Stormwater #5	12/13/2004	1840	Water
4121411-05	Stormwater #6	12/13/2004	1850	Water
4121411-06	Stormwater #14	12/13/2004	1910	Water
4121411-07	Stormwater #16	12/13/2004	1925	Water
4121411-08	Stormwater #20	12/13/2004	1945	Water

SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	DETECTION LIMIT	TECH	DATE/TIME
<b>4121411-01 SAMPLE ID: Stormwater #1</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	11.2	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	280	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/60108	COPPER	0.20	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	0.691	mg/L	0.005	BKB	12/17/2004 14:17
ZINC - ICP		ZINC	2.2	mg/L	0.003	BKB	12/17/2004 14:17
<b>4121411-02 SAMPLE ID: Stormwater #3</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	9.6	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	130	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/60108	COPPER	0.23	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	0.398	mg/L	0.005	BKB	12/17/2004 14:17
ZINC - ICP		ZINC	2.3	mg/L	0.003	BKB	12/17/2004 14:17
<b>4121411-03 SAMPLE ID: Stormwater #4</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	3.1	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	48	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/60108	COPPER	0.12	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	0.210	mg/L	0.005	BKB	12/17/2004 14:17
ZINC - ICP		ZINC	0.49	mg/L	0.003	BKB	12/17/2004 14:17
<b>4121411-04 SAMPLE ID: Stormwater #5</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	4.4	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	100	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/60108	COPPER	0.17	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	0.401	mg/L	0.005	BKB	12/17/2004 14:17

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SCHN00271874





# CERTIFICATE OF ANALYSIS

REPORT DATE: 12/30/04 15:30

REPORT NUMBER: 4121411

PAGE: 2 OF 2

SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	DETECTION LIMIT	TECH	DATE/TIME
<b>4121411-04 SAMPLE ID: Stormwater #5</b>							
Total Metals by Inductively Coupled Plasma							
ZINC - ICP	EPA 200.7/6010B	ZINC	0.92	mg/L	0.003	BKB	12/17/2004 14:17
<b>4121411-05 SAMPLE ID: Stormwater #6</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	ND	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	14	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.023	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	0.040	mg/L	0.005	BKB	12/17/2004 14:17
ZINC - ICP		ZINC	0.10	mg/L	0.003	BKB	12/17/2004 14:17
<b>4121411-06 SAMPLE ID: Stormwater #14</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	2.4	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	15	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.037	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	0.066	mg/L	0.005	BKB	12/17/2004 14:17
ZINC - ICP		ZINC	0.19	mg/L	0.003	BKB	12/17/2004 14:17
<b>4121411-07 SAMPLE ID: Stormwater #16</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	2.0	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	12	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.033	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	0.019	mg/L	0.005	BKB	12/17/2004 14:17
ZINC - ICP		ZINC	0.20	mg/L	0.003	BKB	12/17/2004 14:17
<b>4121411-08 SAMPLE ID: Stormwater #20</b>							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	ND	mg/L	2.0	PA	12/16/2004 09:57
SUSPENDED SOLIDS EPA 160.2		TOTAL SUSPENDED SOLIDS	18	mg/L	1.0	AKH	12/20/2004 14:18
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.009	mg/L	0.005	BKB	12/17/2004 14:17
LEAD - ICP		LEAD	ND	mg/L	0.005	BKB	12/17/2004 14:17
ZINC - ICP		ZINC	0.028	mg/L	0.003	BKB	12/17/2004 14:17

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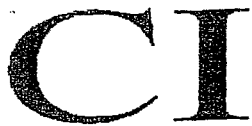
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Relinquished By: 	Date/Time 12/14/04 1539	Received By: 	Date/Time 12-14-4 1539	FOR LABORATORY USE ONLY	
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				Laboratory Project Number: _____	Cash/check # _____
				Due Date: _____	Amount Paid: \$ _____

SCHN00271876





# CERTIFICATE OF ANALYSIS

CLIENT: Schnitzer Steel  
ATTN: James Jakubiak  
P.O. BOX 10047  
Portland OR, 97296

PROJECT NAME: 1200Z Stormwater Test

PHONE: (503) 286-6976  
FAX: (503) 286-6948

SUBMITTED: 03/31/05 12:15

REPORT DATE: 04/11/05 15:12

REPORT NUMBER: 5033110

PAGE: 1 OF 2

CI SAMPLE	CLIENTS ID#	DATE	TIME	MATRIX
5033110-01	Stormwater #1	03/26/2005	0830	Water
5033110-02	Stormwater #3	03/26/2005	0835	Water
5033110-03	Stormwater #4	03/26/2005	0842	Water
5033110-04	Stormwater #5	03/26/2005	0848	Water
5033110-05	Stormwater #6	03/26/2005	<del>0848</del>	Water 0658 919
5033110-06	Stormwater #15	03/26/2005	<del>0848</del>	Water 0915 939
5033110-07	Stormwater #16	03/26/2005	<del>0848</del>	Water 0930 939
5033110-08	Stormwater #20	03/26/2005	<del>0848</del>	Water 0940 939

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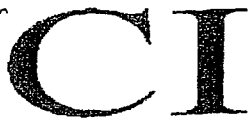
SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	DETECTION LIMIT	TECH	DATE/TIME
5033110-01 SAMPLE ID: Stormwater #1							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	3.7	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	4.0	mg/L	1.5	MRP	04/01/2005 12:42
Total Metals by Inductively Coupled Plasma							
COPPER - ICP EPA 200.7/6010B		COPPER	0.083	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.114	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.58	mg/L	0.003	BKB	04/01/2005 14:33
5033110-02 SAMPLE ID: Stormwater #3							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	ND	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	12	mg/L	1.5	MRP	04/01/2005 12:42
Total Metals by Inductively Coupled Plasma							
COPPER - ICP EPA 200.7/6010B		COPPER	0.066	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.119	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.81	mg/L	0.003	BKB	04/01/2005 14:33
5033110-03 SAMPLE ID: Stormwater #4							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	ND	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	21	mg/L	1.5	MRP	04/01/2005 12:42
Total Metals by Inductively Coupled Plasma							
COPPER - ICP EPA 200.7/6010B		COPPER	0.056	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.084	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.90	mg/L	0.003	BKB	04/01/2005 14:33
5033110-04 SAMPLE ID: Stormwater #5							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	ND	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	80	mg/L	1.5	MRP	04/01/2005 12:42

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# CERTIFICATE OF ANALYSIS

REPORT DATE: 04/11/05 15:12

REPORT NUMBER: 5033110

PAGE: 2 OF 2

SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	DETECTION LIMIT	TECH	DATE/TIME
<b>5033110-04</b> SAMPLE ID: Stormwater #5							
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.093	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.217	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.59	mg/L	0.003	BKB	04/01/2005 14:33
<b>5033110-05</b> SAMPLE ID: Stormwater #6							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	ND	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	28	mg/L	1.5	MRP	04/01/2005 12:42
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.008	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.019	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.034	mg/L	0.003	BKB	04/01/2005 14:33
<b>5033110-06</b> SAMPLE ID: Stormwater #15							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	8.0	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	34	mg/L	1.5	MRP	04/01/2005 12:42
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.058	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.086	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.17	mg/L	0.003	BKB	04/01/2005 14:33
<b>5033110-07</b> SAMPLE ID: Stormwater #16							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	ND	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	5.0	mg/L	1.5	MRP	04/01/2005 12:42
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.028	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.054	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.29	mg/L	0.003	BKB	04/01/2005 14:33
<b>5033110-08</b> SAMPLE ID: Stormwater #20							
General Bench Analysis							
O & G, TOTAL (HEM) EPA 1664		TOTAL OIL AND GREASE	ND	mg/L	2.0	DM	04/11/2005 09:07
SUSPENDED SOLIDSEPA 160.2		TOTAL SUSPENDED SOLIDS	8.0	mg/L	1.5	MRP	04/01/2005 12:42
Total Metals by Inductively Coupled Plasma							
COPPER - ICP	EPA 200.7/6010B	COPPER	0.019	mg/L	0.005	BKB	04/01/2005 14:33
LEAD - ICP		LEAD	0.027	mg/L	0.005	BKB	04/01/2005 14:33
ZINC - ICP		ZINC	0.29	mg/L	0.003	BKB	04/01/2005 14:33

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[illegible]SCHN00271879





# Oregon

John A. Kitzhaber, M.D., Governor

Department of Environmental Quality

Northwest Region  
2020 SW Fourth Avenue  
Suite 400  
Portland, OR 97201-4987  
(503) 229-5263 Voice  
TTY (503) 229-5471

June 16, 2000

Tom Zelenka  
Manager-Legislative/Environmental and Public Affairs  
Schnitzer Investment Corporation  
PO Box 10047  
Portland, OR 97296

Re: Transmittal of Executed Schnitzer Voluntary Agreement

Dear Mr. Zelenka:

Enclosed please find an executed original of the Voluntary Agreement for Remedial Investigation and Source Control Measures between Schnitzer Investment Corporation, Inc., (Schnitzer) and the Department of Environmental Quality (DEQ). As you know, the scope of work calls for submission of Schnitzer's pre-remedial investigation work plan within 30 days of issuance of this Agreement (issued June 16, 2000).

Schnitzer has expressed disappointment with the voluntary agreement and the process by which the voluntary agreement was negotiated with responsible parties. DEQ disagrees, however, with Schnitzer's characterization of both. Among other things, Schnitzer contends that DEQ has exceeded its statutory authority. This argument is premised upon the erroneous assumption that DEQ is forcing parties that are not liable under ORS 465.255 to perform work under the voluntary agreement. DEQ does not take the position that it has authority to require parties that are not liable under ORS 465.255 to implement a remedy. But, unlike Schnitzer, it does not assume that Schnitzer (or any other party asked to enter voluntary agreements) is not liable under ORS 465.255.

Schnitzer also mischaracterizes the negotiations leading up to the final voluntary agreement. As you know, DEQ made a number of significant revisions to the agreement in response to input from Schnitzer and others; revisions that addressed most of concerns voiced by the parties involved. The final agreement includes each term to which DEQ agreed during the negotiations. The agreement now differs substantially from that which was introduced to all the Portland Harbor potentially responsible parties at the meeting DEQ convened on October 12, 1999, in Portland, at the Oregon State Office Building. As DEQ explained then, and consistently maintained in subsequent discussions with numerous parties, due to the high environmental priority of the work, DEQ would allow cooperative parties to sign agreements with DEQ, in lieu of issuing traditional orders. These agreements were never characterized as the voluntary agreements DEQ typically negotiates, at the request of responsible parties, for low environmental priority sites. In fact, DEQ introduced these agreements as being non-negotiable, in the interest of time and site priority. However, in response to Schnitzer's request, DEQ agreed to consider

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significant changes in support of your unique needs. Although DEQ did not concur with each of the proposed revisions, it remains confident that the decisions made were well supported and the negotiations conducted in good faith.

Finally, Schnitzer questions DEQ's decision to approach sites that require enforcement differently from those sites that agree to perform the necessary work voluntarily. In this situation, as in many others, DEQ has attempted to provide all reasonable incentives to cooperative parties subject to state and federal cleanup requirements. At the same time, the State attempts to preserve its most effective enforcement options, should enforcement be necessary to insure that investigation and cleanup proceed quickly, and with the least burden to all taxpayers. DEQ does not agree that the reservation of these options should be considered "coercion".

Portland Harbor is a very complex and high-priority project. It is imperative that investigation of harbor sites proceeds without delay and, to the greatest extent possible, without orphan site funding of site investigations or cleanups. DEQ looks forward to Schnitzer's cooperation in making that happen. If you would like to meet to discuss this further, please contact me (229-6712) or Neil Mullane, NWR Administrator (229-5827).

Sincerely,



Michael E. Rosen, Manager  
Voluntary Cleanup and Portland Harbor

Enclosure

Cc: Langdon Marsh, Director, DEQ  
Neil Mullane, Administrator, NWR, DEQ  
Eric Blischke, NWR, DEQ  
Alicia Voss, NWR, DEQ  
Kurt Burkholder, Department of Justice  
Lynne Perry, Department of Justice  
Joan Snyder, Stoel Rives

SCHN00271881



**VOLUNTARY AGREEMENT FOR  
REMEDIAL INVESTIGATION AND SOURCE CONTROL MEASURES**

**DEQ NO. WMCVC- NWR- 0015**

**BETWEEN: Schnitzer Investment Corporation (Schnitzer)**

**AND: Oregon Department of Environmental Quality (DEQ)**

**EFFECTIVE DATE: May \_\_\_, 2000**

Pursuant to ORS 465.260(2) and (4), the Director, Oregon Department of Environmental Quality (DEQ), enters this Agreement with Schnitzer Investment Corporation (Schnitzer). This Agreement contains the following provisions:

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**I. RECITALS**

- A. Schnitzer is a "person" under ORS 465.200(20).
- B. The Schnitzer site occupies approximately 200 acres at 12005 N. Burgard Road, Portland, Oregon. A vicinity map and a site map are included in Attachment A to this Agreement. The Schnitzer site does not include the property that was formerly leased to Premier Edible Oils and C&T Quincy Foods.
- C. The Schnitzer site is located within or near what is known as the Portland Harbor, a six-mile reach of the Willamette River between Sauvie Island and Swan Island. A 1997 study by DEQ and the U.S. Environmental Protection Agency identified elevated levels of



hazardous substances in shallow, near-shore sediments throughout the Portland Harbor.

D. Schnitzer has owned the Site since 1972. Current site operations are varied. Schnitzer Steel Industries (SSI) operates a scrap metal recycling yard and deep marine terminal at the Site. SSI processes, stores, and exports recyclable materials on approximately 93 acres. Its shipping docks are located along the Site's western riverfront and an approximate 11-acre slip (International Terminals Slip). \*Other current Site operations include nonferrous metals recovery, fabrication and painting of automobile transport trailers, truck maintenance, ocean shipping container storage and repair facility, machine shop, sandblasting, and the manufacture of protective coatings. \*Recent site operations also included processing, storing and shipping of cooking oils and warehousing.

\* E. Materials used and stored on-site include diesel, hydraulic oil, waste oil and other petroleum products; paint, hardeners, and solvents. Primary wastes generated by SSI and other site operators include non-metallic rail car and other scrap operation debris, used oil, used antifreeze, used solvent and solid wastes. At least eight releases of petroleum to the Willamette River from the Schnitzer site have been reported since 1979. Previous investigations have detected contamination in soil and groundwater on, and sediments adjacent to, the Site.

\* F. The following contaminants were detected in sediment samples collected adjacent to the Schnitzer site at concentrations exceeding baseline concentrations established for the Portland Harbor Study Area: antimony, arsenic, barium, cadmium, cobalt, copper, chromium, iron, manganese, lead, mercury, nickel, silver, zinc, organotins, bis (2-ethylhexyl) phthalate, butylbenzylphthalate; carbazole, dibenzofuran, 2-methylnaphthylene, and low- and high- molecular weight polynuclear aromatic hydrocarbons (LPAHs and HPAHs, respectively). Concentrations of antimony, carbazole, dibenzofuran, mercury, zinc, LPAHs, and HPAHs were all more than twice their respective baseline values. Concentrations of organotins at one sediment sample location were more than 150 times the baseline value. Investigations have also disclosed contamination of soil and groundwater at the Site.

The substances described in this section are "hazardous substances" under ORS 465.200(15). \*The presence of hazardous substances in soil, groundwater, and sediments at or near the site constitutes a "release" or "threat of release" into the environment under ORS 465.200(21). The Schnitzer site and the contaminated sediments at or near the site are a "facility" under ORS 465.200(12).

\* DEQ contentions, not admitted by Schnitzer



- G. DEQ considers the activities required by this Agreement to be necessary to protect public health, safety, and welfare and the environment.

## II. AGREEMENT

The parties agree as follows:

### A. Work

#### 1. Remedial Investigation

Schnitzer shall perform a remedial investigation satisfying OAR 340-122-0080, the terms and schedule of a DEQ approved work plan developed by Schnitzer, and applicable elements of the Scope of Work contained in Attachment B to this Agreement. Schnitzer may specify, in the proposed work plan, elements of the Scope of Work that [NAME of PARTY] considers inapplicable or unnecessary to the remedial investigation for the facility. Schnitzer may propose to perform the work in phases or operable units.

#### 2. Source Control Measures

For any unpermitted discharge or migration of contaminants to the Willamette River or sediments identified in the remedial investigation, Schnitzer shall evaluate such discharge or migration, and then develop and implement source control measures in accordance with the Scope of Work.

#### 3. DEQ-Review

DEQ shall provide review, approvals/disapprovals, and oversight in accordance with the schedule set forth in the Scope of Work, or as soon as thereafter practicable in the event staff resources or workload prevent compliance with the schedule. Any DEQ delay shall correspondingly extend Schnitzer's schedule for a related deliverable or activity.

#### 4. Additional Measures

Schnitzer may elect at any time during the term of this Agreement to undertake remedial measures other than those required under this Agreement necessary to address a release or threatened release of hazardous substances at the facility. Such other measures shall be subject to prior approval by DEQ. Prior approval shall not be required in emergencies where Schnitzer reasonably believes a delay in undertaking a particular action will threaten human health,



safety, or the environment; provided that Schnitzer notifies DEQ of the emergency and action as soon as is practicable.

5. Dredging Activities

Schnitzer shall notify the DEQ project manager at least sixty (60) days before undertaking any dredging or other activity that might disturb sediments at or near the facility. In its notice of dredging or other activity, Schnitzer shall: (a) Evaluate the concentration of hazardous substances present in and below the affected sediments based on sampling and analyses performed in advance of the notice; (b) Document the steps to be taken to ensure that both the activity and the subsequent management and disposal of dredged spoils will be conducted in a manner protective of human health and the environment; and (c) Evaluate the effect of the activity on the Portland Harbor Remedial Investigation and Feasibility Study. Dredging may proceed under existing permits subject to the above notice and implementation of any additional dredging or management practices required by DEQ. DEQ shall also be notified of and copied on any permit application to the Oregon Division of State Lands or United States Army Corps of Engineers for dredging or other activity disturbing sediments adjacent to the Schnitzer site. Notwithstanding the foregoing, Schnitzer may conduct dredging or other activities that might disturb sediments at or near the facility without giving DEQ 60 days' notice, if such activities are conducted in accordance with an effective Dredging Agreement between Schnitzer and DEQ that describes the notification and sampling requirements, dredging, management, and disposal practices, and any other measures that Schnitzer will take to ensure that all activities within the scope of the Dredging Agreement are conducted in a manner that is protective of human health and the environment and consistent with Harborwide cleanup work.

B. Public Participation

Upon execution of this Agreement, DEQ will provide public notice of this Agreement through issuance of a press release, at a minimum to a local newspaper of general circulation, describing the measures required under this Agreement. Copies of the Agreement will be made available to the public. DEQ shall provide Schnitzer a draft of such press release and consider any comments by Schnitzer on the draft press release, before publication.



**C. DEQ Access and Oversight**

1. Schnitzer shall allow DEQ to enter all portions of the facility at all reasonable times for the purposes, among other things, of inspecting records relating to work under this Agreement; observing Schnitzer's progress in implementing this Agreement; conducting such tests and taking such samples as DEQ deems necessary; verifying data submitted to DEQ by Schnitzer; and, using camera, sound recording, or other recording equipment for purposes relating to work under this Agreement. Upon Schnitzer's verbal request, DEQ shall make available to Schnitzer a split or duplicate of any sample or recording taken by DEQ pursuant to this Agreement. DEQ shall use its best efforts, but not be obligated, to provide reasonable advance notice before entering the facility. DEQ shall adhere to all health and safety requirements of the facility, as identified in the applicable Health and Safety Plan, including, but not limited to, requirements in portions of the Site where outside visitors must be accompanied by company personnel.
2. Schnitzer shall permit DEQ to inspect and copy all records, files, photographs, documents, and data in connection with work under this Agreement, except that Schnitzer shall not be required to permit DEQ inspection or copying of items subject to attorney-client or attorney work product privilege. DEQ shall use its best efforts, but not be obligated, to provide reasonable notice before records inspection and copying requests.
3. Attorney-client and work product privileges may not be asserted with respect to any records required under Paragraphs II.G.1 and II.G.2 of this Agreement. Schnitzer shall identify to DEQ--by addressor-addressee, date, general subject matter, and distribution--any document, record, or item withheld from DEQ on the basis of attorney-client or attorney work product privilege. DEQ reserves its rights under law to obtain documents DEQ asserts are improperly withheld by Schnitzer.



**D. Project Managers**

1. To the extent possible, all reports, notices, and other communications required under or relating to this Agreement shall be directed to:

DEQ Project Manager:

Alicia C. Voss  
Voluntary Cleanup and  
Portland Harbor Section  
2020 SW Fourth, Suite 400  
Portland, Oregon 97204  
503-229-5011

Schnitzer Project Manager:

Tom Zelenka  
Schnitzer Investment  
Corporation  
P.O. Box 10047  
Portland, Oregon 97296-0047  
503-224-9900

2. Schnitzer's and DEQ's Project Managers shall be available and have the authority to make day-to-day decisions necessary to complete the Scope of Work under this Agreement.

**E. Notice and Samples**

Schnitzer shall make every reasonable attempt to notify DEQ of any excavation, drilling, or sampling to be conducted under this Agreement at least five (5) working days before such activity but in no event less than twenty-four (24) hours before such activity. Upon DEQ's verbal request, Schnitzer shall make available to DEQ a split or duplicate of any sample taken pursuant to this Agreement. DEQ shall make every effort to complete analysis of any split or duplicate sample on a schedule consistent with Schnitzer's schedule for related activities. DEQ shall provide Schnitzer with copies of all analytical data from such samples as soon as practicable.

**F. Quality Assurance**

Schnitzer shall conduct all sampling, sample transport, and sample analysis in accordance with the Quality Assurance/ Quality Control (QA/QC) provisions approved by DEQ as part of the work plan. All plans prepared and work conducted as part of this Agreement shall be consistent with DEQ's "Quality Assurance Policy No. 760.00". Schnitzer shall ensure that each laboratory used by Schnitzer for analysis performs such analyses in accordance with such provisions.

**G. Records**

1. In addition to those technical reports and documents specifically required under this Agreement, Schnitzer shall provide to DEQ within thirty (30) days of DEQ's written request copies of documents generated in connection with the



work required under this Agreement, including QA/QC memoranda and QA/QC audits, draft and final deliverable plans, final reports, task memoranda, field notes, and laboratory analytical data that have undergone data quality validation.

2. If DEQ determines that review of raw data or preliminary laboratory reports is necessary in order to ensure protection of public health, safety, and welfare and the environment, that information will be provided by Schnitzer within ten (10) days of DEQ's written request.
3. Schnitzer and DEQ shall preserve all records and documents in possession or control of Schnitzer and DEQ, respectively, or their employees, agents, or contractors that relate in any way to activities under this Agreement for at least five (5) years after termination under Subsection II.R. of this Agreement; provided that after such 5-year period, Schnitzer and DEQ shall provide the other sixty (60) days notice before destruction or other disposal of such records and make them available for inspection and copying.
4. Schnitzer may assert a claim of confidentiality regarding any documents or records submitted to or copied by DEQ pursuant to this Agreement. DEQ shall treat documents and records for which a claim of confidentiality has been made in accordance with ORS 192.410 through 192.505. If Schnitzer does not make a claim of confidentiality at the time the documents or records are submitted to or copied by DEQ, the documents or records may be made available to the public without notice to Schnitzer.

#### **H. Progress Reports**

During each quarter of this Agreement, Schnitzer shall deliver to DEQ on or before the fifteenth (15<sup>th</sup>) day following the end of the calendar quarter two (2) copies of a progress report containing the following items. DEQ anticipates that the progress report will not exceed 2 pages in length.

1. Actions taken under this Agreement during the previous quarter;
2. Actions scheduled to be taken in the next quarter;
3. Sampling, test results, and any other data generated by Schnitzer during the previous quarter; and
4. A description of any problems experienced during the previous quarter and the actions taken to resolve them.



## **I. Other Applicable Laws**

Subject to ORS 415.315(3), all actions under this Agreement shall be performed in accordance with all applicable federal, state, and local laws and regulations.

## **J. Reimbursement of DEQ Oversight Costs**

1. Prior to entry of this Agreement, DEQ shall submit to Schnitzer an estimate of costs incurred by DEQ to date for site assessment activities and preparation and negotiation of this Agreement. Upon entry of this Agreement, DEQ shall submit to Schnitzer a statement for costs actually and reasonably incurred by DEQ prior to entry of this Agreement for site assessment activities and preparation and negotiation of this Agreement and an estimate of future DEQ oversight costs associated with Schnitzer's implementation of this Agreement.
2. DEQ shall submit to Schnitzer a monthly statement of costs incurred after issuance of this Agreement by DEQ in connection with oversight of Schnitzer's implementation of this Agreement. Each invoice will include a summary of costs billed to date. DEQ's invoice for direct costs will include a direct labor summary showing the persons charging time, the amount of time, and the nature of the work performed.
3. DEQ or State of Oregon oversight costs payable by Schnitzer shall include both direct and indirect costs. Direct costs shall include site-specific expenses, DEQ contractor costs, and DEQ legal costs. Indirect costs shall include those general management and support costs of the DEQ and of the applicable administering division (e.g. Waste Prevention and Management Division, Environmental Cleanup Division, Northwest Region) that are allocable to DEQ oversight of this Agreement and not charged as direct, site-specific costs. Indirect costs shall be based on a percentage of direct personal services costs. DEQ oversight costs also shall include the surcharge required by ORS 465.333.
4. Within thirty (30) days of receipt of a DEQ statement, Schnitzer shall pay the amount of costs billed by check made payable to the "State of Oregon, Hazardous Substance Remedial Action Fund". Schnitzer shall pay simple interest of 9% per annum on the unpaid balance of any oversight costs, which interest shall begin to accrue at the end of the 30-day payment period.



**K. Force Majeure**

1. If any event occurs that is beyond Schnitzer's reasonable control and that causes or might cause a delay or deviation in performance of the requirements of this Agreement, Schnitzer shall promptly notify DEQ's Project Manager verbally of the cause of the delay or deviation and its anticipated duration, the measures that have been or will be taken to prevent or minimize the delay or deviation, and the timetable by which Schnitzer proposes to carry out such measures. Schnitzer shall confirm in writing this information within five (5) working days of the verbal notification.
2. If Schnitzer demonstrates to DEQ's satisfaction that the delay or deviation has been or will be caused by circumstances beyond the reasonable control and despite the due diligence of Schnitzer, DEQ shall extend times for performance of related activities under this Agreement as appropriate. Circumstances or events beyond Schnitzer's control might include but are not limited to acts of God, unforeseen strikes or work stoppages, fire, explosion, riot, sabotage, or war. Increased cost of performance or changed business or economic circumstances shall be presumed not to be circumstances beyond Schnitzer's reasonable control.

**L. Prior Approval**

Where DEQ review and approval is required for any plan or activity under this Agreement, Schnitzer shall not proceed to implement the plan or activity until DEQ approval is received. Any DEQ delay in granting or denying approval shall correspondingly extend the time for completion by Schnitzer. Prior approval shall not be required in emergencies where Schnitzer reasonably believes a delay in undertaking a particular action will threaten human health, safety, or the environment; provided that Schnitzer notifies DEQ of the emergency and action as soon as is practicable.

**M. Dispute Resolution**

In the event of disagreement between Schnitzer and DEQ regarding implementation of this Agreement, Schnitzer and DEQ shall, in the following order: 1) make a good faith effort to resolve the dispute between Project Managers; 2) if necessary, refer the dispute for resolution by the immediate supervisors of the Project Managers; 3) if necessary, provide each other their respective positions in writing and refer the dispute for resolution by DEQ's Administrator of the Waste Prevention and Management Division or the appropriate Region Administrator and



Schnitzer's (ADMINISTRATOR'S COUNTERPART); and 4) if necessary, refer the dispute for resolution by DEQ's Director and Schnitzer's (DIRECTOR'S COUNTERPART). DEQ's final decision after such dialogue shall be enforceable under this Agreement. The time required for dispute resolution shall correspondingly extend Schnitzer's schedule for all pending, affected deliverables or activities.

**N. Enforcement of Agreement and Reservation of Rights**

1. In the event of Schnitzer's failure to comply with this Agreement (including any failure to reimburse oversight costs), DEQ may enforce this Agreement as an order under ORS 465.260(5) or may terminate this Agreement after thirty (30) days written notice to Schnitzer.
2. In the event of DEQ's failure to provide oversight in accordance with this Agreement, Schnitzer may terminate this Agreement after thirty (30) days written notice to DEQ. Costs incurred or obligated by DEQ before the effective date of any termination of this Agreement shall be owed under the Agreement notwithstanding such termination.
3. Schnitzer does not admit any facts (including those recited herein), legal issues, liability, or violation of law by virtue of entering this Agreement.
4. Except as otherwise provided in Subsection II.O., nothing in this Agreement shall prevent Schnitzer from exercising any rights of contribution or indemnification Schnitzer might have against any person, including the State of Oregon, regarding the release(s) of hazardous substances that are the subject of this Agreement; provided Schnitzer waives any right it might have under ORS 465.260(7) to seek reimbursement from the Hazardous Substance Remedial Action Fund for costs incurred under this Agreement.
5. Schnitzer agrees not to litigate, in any proceeding brought by DEQ to enforce this Agreement, any issue other than Schnitzer's or DEQ's compliance with this Agreement.
6. In the event that the Schnitzer site becomes part of a federal National Priority List (NPL) site, DEQ agrees to cooperate with Schnitzer to encourage EPA to accept satisfactory and complete performance under this Agreement as fulfillment of Schnitzer's obligation to perform the same work under a subsequently issued EPA Order or Consent Decree. If EPA does not agree that such performance under this Agreement fulfills the EPA-imposed obligations, the Agreement



may be modified pursuant to Subsection II.Q. or terminated at the election of DEQ or Schnitzer. Notwithstanding the foregoing, if the Portland Harbor area becomes part of a federal NPL site, but (1) the Schnitzer site is not itself included in the area expressly covered by the NPL listing (e.g. the Harbor is listed but upland sites are not) or (2) DEQ remains the lead agency with respect to the Schnitzer site, this Agreement shall remain in full force and effect, however; if EPA orders any conflicting or overlapping activities, this Agreement shall be modified, as necessary, to prevent conflicting or duplicative obligations. Any other additional EPA-imposed obligations may be addressed by modification of this Agreement under Subsection II.Q. or by separate agreement or order.

**O. Hold Harmless**

1. Schnitzer shall save and hold harmless the State of Oregon and its commissions, agencies, officers, employees, contractors, and agents, and indemnify the foregoing, from and against any and all claims arising from acts or omissions related to this Agreement of Schnitzer or its officers, employees, contractors, agents, receivers, trustees, or assigns. DEQ shall not be considered a party to any contract made by Schnitzer or its agents in carrying out activities under this Agreement.
2. To the extent permitted by Article XI, Section 7, of the Oregon Constitution and by the Oregon Tort Claims Act, the State of Oregon shall save and hold harmless Schnitzer and its officers, employees, contractors, and agents, and indemnify the foregoing, from and against any and all claims arising from acts or omissions related to this Agreement of the State of Oregon or its commissions, agencies, officers, employees, contractors, or agents (except for acts approving or omissions constituting approval of any activity of Schnitzer under this Agreement). Schnitzer shall not be considered a party to any contract made by DEQ or its agents in carrying out activities under this Agreement.

**P. Parties Bound**

This Agreement shall be binding on the parties and their respective successors, agents, and assigns. The undersigned representative of each party certifies that he or she is fully authorized to execute and bind such party to this Agreement. No change in ownership or corporate or partnership status relating to the facility shall in any way alter Schnitzer's obligations under this Agreement, unless otherwise approved in writing by DEQ.



**Q. Modification**

DEQ and Schnitzer may modify this Agreement by mutual written agreement.

**R. Duration and Termination**

Upon completion of work under this Agreement, Schnitzer shall submit to DEQ a written notice of completion. This Agreement shall be deemed satisfied and terminated upon payment of all oversight costs owed and upon DEQ's issuance of a letter acknowledging satisfactory completion of activities in accordance with this Agreement. Such letter shall be issued within sixty (60) days of receipt of notice of completion evidencing satisfactory completion of activities in accordance with this Agreement and payment of outstanding DEQ oversight costs, or as soon thereafter as is reasonably practicable. In the event that DEQ is unable to issue such letter within sixty days of receipt of Schnitzer's written notice of completion, DEQ shall provide Schnitzer with a written schedule upon which DEQ anticipates review of Schnitzer's work and issuance of that letter.

**Schnitzer**

By: Tom Zelenka Date: June 5, 2000  
Tom Zelenka (Name)  
Manager-Legislative/Environmental and Public Affairs  
(Title)

**STATE OF OREGON  
DEPARTMENT OF ENVIRONMENTAL QUALITY**

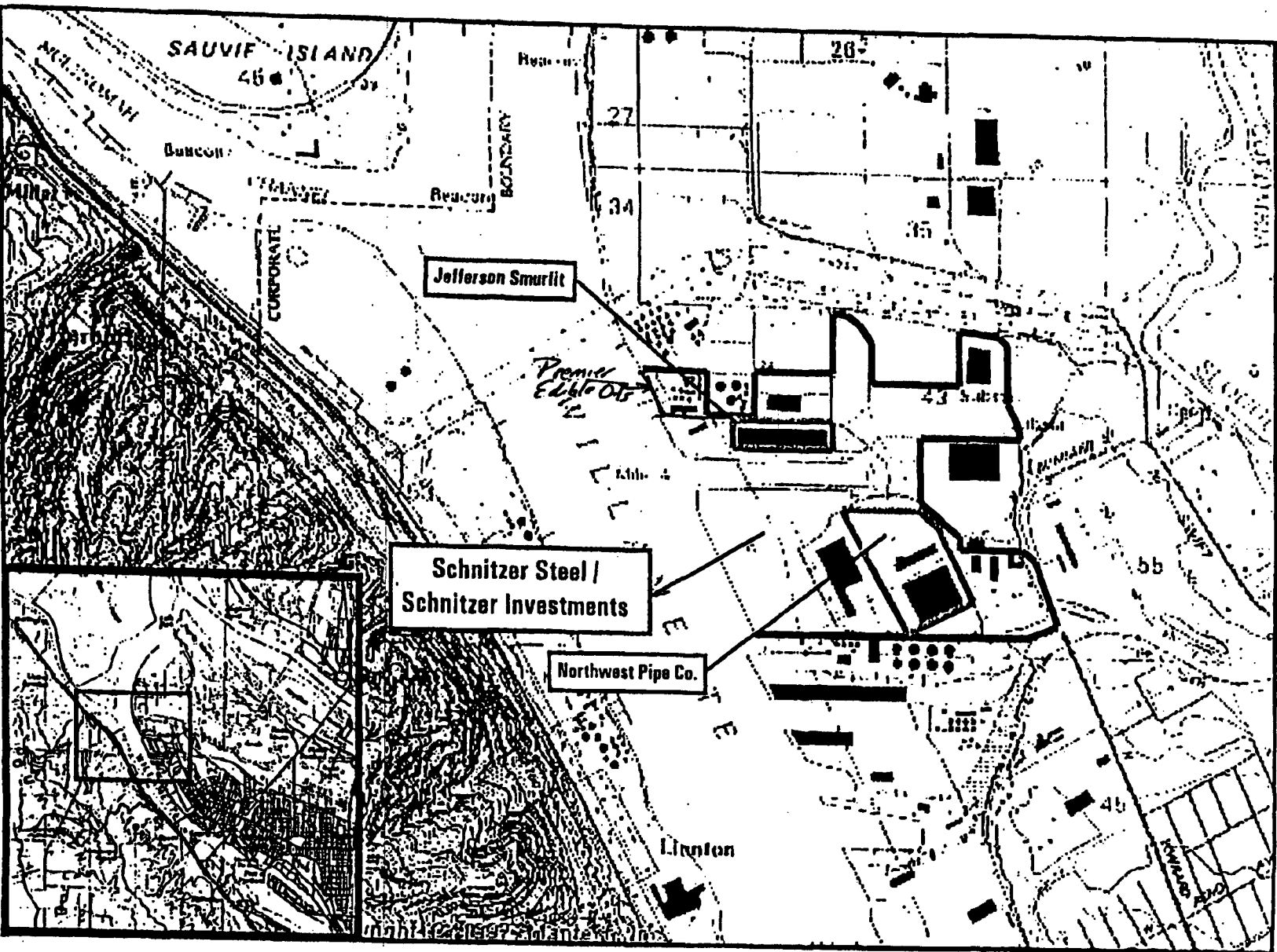
By: Neil Mullane Date: 6/13/2000  
(Name)  
Administrator NWR  
(Title)

KBB/GEN30415



Figure 1 Site Location

Attachment A





## **ATTACHMENT B**

### **SCOPE OF WORK FOR REMEDIAL INVESTIGATION AND SOURCE CONTROL MEASURES**

#### **I. SCHEDULE**

Respondent shall submit for DEQ review and approval Remedial Investigation (RI), Risk Assessment (RA), and Source Control Measures (SCM) work plans and reports which address all elements of this Scope of Work (SOW). Elements of the SOW may be addressed by alternative means or by using existing data or information to the extent that the data are applicable, meet the objectives of the RI, and are of acceptable QA/QC.

All work completed under this Agreement shall proceed in accordance with the schedule below:

<b>RI Assessment Work Plan (if Respondent elects to perform a Pre-RI Assessment)</b>	A Pre-RI Assessment Work Plan will be submitted to DEQ within 30 days of the issuance of this Agreement.
<b>DEQ Review and Comment</b>	To Respondent within 30 days of receipt of Pre-RI Assessment Work Plan.
<b>Pre-RI Assessment Report</b>	To be specified in Pre-RI Assessment Work Plan.
<b>RI Proposal</b>	An RI proposal will be submitted to DEQ within 30 days of issuance of this Agreement or, if a Pre-RI Assessment is performed and DEQ determines that an RI is necessary, based on the results of a Pre-RI Assessment, within 30 days of approval of the Pre-RI Assessment Report.
<b>DEQ Review and Comment</b>	To Respondent within 30 days of receipt of RI Proposal.
<b>Draft RI Work Plan</b>	To DEQ within 45 days of receipt of DEQ comments on RI Proposal.
<b>DEQ Review and Comment</b>	To Respondent within 30 days of receipt of draft RI Work Plan.
<b>Final RI Work Plan</b>	To DEQ within 30 days of receipt of DEQ comments on draft RI Work Plan.
<b>Initiation of RI</b>	To be specified in Project Management section of RI Work Plan.
<b>Initiation of SCM</b>	To be specified in Project Management section of RI Work Plan.



The schedule for additional deliverables specified in this SOW (e.g., Risk Assessment work plan, Remedial Investigation report, Risk Assessment report, and Source Control Measure work plan) should be specified in the Project Management Plan section of the RI work plan.

All work plans may be amended by Respondent as necessary to reflect or incorporate newly discovered information and/or environmental conditions. Additional work plans and work plan amendments are subject to DEQ review and approval and shall be processed according to schedules negotiated between the parties at the time of each phase change or task addition. Respondent shall initiate and complete work according to the schedule specified in the applicable approved work plan or amendment. Future schedules or deadlines for all submittals, work plans or other requirements shall be adjusted accordingly for the time necessary for preparation, approval and implementation of additional work plans, investigations and/or reports not contemplated in the original schedule and shall be approved by DEQ in writing.

## II. OBJECTIVES

Work performed under this Agreement shall complement and incorporate existing facility information with the following specific objectives. For purposes of this Scope of Work, the "facility" shall exclude that portion of the facility that is below the mean high-water mark of the Willamette River. The parties acknowledge that a separate Portland Harbor Sediment RI/FS is proceeding with respect to the portion of the Willamette River below the mean high-water mark, and it is not the purpose of this Scope of Work to duplicate any of that work:

- A. Identify and characterize all hazardous substance source areas at the **Schnitzer** facility. Source areas shall be characterized through a review of historical information and the collection of environmental samples for chemical, geotechnical, and other analyses. The evaluation of source areas shall focus on upland operations that may have resulted in a release of hazardous substances.
- B. Evaluate all contaminant migration pathways at the **Schnitzer** facility. Key elements relevant to contaminant migration include, but are not limited to, the rate and direction of groundwater flow, subsurface contaminant migration to the Willamette River, overland contaminant migration to the Willamette River, storm water discharge to the Willamette River, direct and indirect release to the Willamette River, preferential migration pathways, volatilization, dust entrainment, and riverbank seepage.
- C. Determine the nature, extent, and distribution of hazardous substances in affected media at the **Schnitzer** facility. This analysis should focus on the vertical and horizontal extent of source area contamination, groundwater contamination, and surface and subsurface soil contamination.



- D. Identify all current and reasonably likely future human and ecological receptors at the Schnitzer facility. Receptors shall include human and ecological receptors that may be exposed to hazardous substances at the facility. This analysis should consider all relevant contaminant migration pathways and the nature, extent and distribution of hazardous substances in affected media.
- E. Collect sufficient data and historical information to allow the identification of possible areas of sediment contamination adjacent to the Schnitzer facility. Areas of potential sediment contamination shall be characterized through the Portland Harbor Sediment RI/FS. Data collection and evaluation shall consider the potential for contaminant migration to the Willamette River and over or in-water releases of hazardous substances resulting from operations at the Schnitzer facility. Respondent may be required to perform limited sediment or benthic sampling adjacent to the facility as necessary to address an objective of this Scope of Work but will not be required to conduct sediment or benthic sampling that is duplicative of sampling under the Portland Harbor sediment RI/FS.
- F. Evaluate the risk to human health and the environment from releases of hazardous substances at or from the Schnitzer facility through the performance of human health and ecological risk assessments.
- G. Identify hot spots of contamination, if any, at the Schnitzer facility.
- H. Generate or use data of sufficient quality for site characterization and risk assessment at the Schnitzer facility.
- I. Develop the information necessary to evaluate and design necessary source control measures to address contaminant releases from the Schnitzer facility.
- J. Implement necessary source control measures to address contaminant releases from the Schnitzer facility.

### III. Pre-RI Assessment Work Plan and Report

Respondent may elect to perform a Pre-RI Assessment as the initial task under this Agreement. The primary purpose of the Pre-RI assessment is to determine which media and pathways (e.g., groundwater, surface water, air, and direct contact) are affected by site related hazardous substances. The Pre-RI Assessment will include a review of the facility history, review of current facility conditions, and may include focused sampling activities, to assess potential past and present sources of hazardous substances and determine if there has been a release from these sources to surface water or sediments, as appropriate.

If Respondent elects to perform a Pre-RI Assessment, Respondent shall submit a Pre-RI Assessment Work Plan for DEQ review and approval. The Pre-RI



Assessment Work Plan shall describe the objectives, deliverables, schedule, and specific tasks that will be performed for the Pre-RI Assessment. If the Pre-RI Assessment includes sampling, the work plan shall describe the sampling locations and the methodologies that will be used for the sampling and analysis.

The Pre-RI Assessment report will present the results of the Pre-RI Assessment including figures and tables presenting the results of any sampling and analysis. The report will present conclusions regarding the likelihood of past or present source(s) and pathway(s) for the release of hazardous substances to sediments adjacent to Respondent's facility and whether a re-evaluation of the priority of Respondent's facility is appropriate.

The results of the Pre-RI Assessment shall be used to determine whether further action is needed to assure protection of present and future public health, safety and welfare, or the environment. No further work shall be required under this Agreement and SOW if, based on historical information and the results of the Pre-RI Assessment or subsequent facility investigation, DEQ reasonably determines that there is no likely present source and pathway for the release of hazardous substances to surface water or sediments at or from Respondent's facility for which DEQ could require a removal action or remedial investigation under ORS 465.200 et seq. Further, should the pre-RI assessment or subsequent facility investigation provide enough information to re-evaluate the priority of the facility, Respondent may request that DEQ perform this evaluation. Should it be determined by DEQ that the facility no longer presents a high priority threat to present and future public health, safety, and welfare or the environment, no further RI work with respect to the uplands portions of the facility shall be required under this Agreement and SOW.

#### **IV. REMEDIAL INVESTIGATION PROPOSAL**

If DEQ determines that further RI work is required (or if Respondent elects not to perform a Pre-RI Assessment), Respondent shall prepare an RI proposal. The RI Proposal shall briefly discuss Respondent's proposed approach to the RI, addressing soil, groundwater, surface water, sediments, and air. The proposal will provide the framework for the RI Work Plan and will include at a minimum, a summary of data collected to date, a conceptual site model (including a conceptual site hydrogeologic model), a description of RI goals and objectives and an estimated schedule for completion of the RI. The RI proposal shall consider methodologies presented in the Portland Harbor Sediment Management Plan and the Portland Harbor Sediment Investigation Work Plan.

#### **V. REMEDIAL INVESTIGATION WORK PLAN**

The work plan shall be developed in accordance with applicable Oregon Administrative Rules (OAR 340-122-010 through -115), DEQ guidance, and the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, OSWER Directive 9355.3-01, 1988, as appropriate. Existing data may be used if it meets data quality objectives for the RI. The results of the



RI shall be utilized to guide data collection efforts performed as part of the Portland Harbor RI/FS Work Plan. The need for the RI Work Plan shall be evaluated based on the results of the pre-RI Assessment. The submitted work plan shall include, but not be limited to the following items:

**A. PROJECT MANAGEMENT PLAN**

The RI Work Plan shall include a proposed schedule for submittals and implementation of all proposed activities and phases pertaining to this scope of work (this schedule will include target dates for the submittal of a Risk Assessment work plan, and submittal of draft and final Remedial Investigation, and Risk Assessment reports); a description of the personnel (including subcontractors, if known) involved in the project, and their respective roles in the project; and a discussion of how variations from the approved work plan will be managed.

**B. SITE DESCRIPTION**

The RI work plan shall include a discussion of the current understanding of the physical setting of the facility and surrounding area; the facility history; hazardous substance and waste management history; facility operations conducted on, in, over or adjacent to the Willamette River and current facility conditions.

**C. SITE CHARACTERIZATION PLAN**

The Site Characterization plan shall be consistent with DEQ guidance and the requirements specified in OAR 340-122-080. The site characterization plan shall include, but not be limited to, characterization of the hazardous substances, characterization of the facility, identification of potential receptors and the collection and evaluation of information relevant to the identification of hot spots of contamination, and shall address the following:

**1. Soils**

**Objective:** To identify and characterize releases of hazardous substances from the facility to soils.

**Scope:** The plan shall supplement previous soil sampling at the facility. The plan shall address all areas of the facility which could potentially have received spills, leaks from tanks or piping, been used for waste treatment or disposal, or have been affected by contaminated surface water or storm water runoff, and all other areas of the facility where soil contamination is known or suspected.

**Procedures:** The plan shall be designed and conducted to determine the vertical and lateral extent of soil contamination, determine the extent to which soil contamination may contribute to



Willamette River sediment contamination, characterize the facility geology, determine the physical and chemical soil characteristics relevant to the RI, evaluate the potential for contaminant migration and gather the information necessary to identify hot spots of contamination. The plan shall include the proposed methodology for characterizing soil.

## 2. Groundwater

Objective: To identify and characterize releases of hazardous substances from the facility to groundwater.

Scope: The plan shall supplement previous investigations at the facility and shall identify and characterize all past, current and potential releases of hazardous substances to groundwater from the facility.

Procedures: The plan shall be designed and conducted to determine the vertical and lateral extent of groundwater contamination, both on and, if applicable, off-site; estimate the rate of contaminant flux to the Willamette River; determine the extent to which free phase product is migrating to the Willamette River; characterize the facility hydrogeology, determine the physical and chemical water bearing zone characteristics relevant to the RI; evaluate the potential for contaminant migration through groundwater; and gather the information necessary to identify hot spots of contamination. The plan shall include the proposed methodology for characterizing groundwater. Alternative methods for characterizing groundwater should be considered to accelerate the RI. Monitoring wells and other holes must be drilled, constructed and decommissioned in accordance with OAR Chapter 690, Division 240 and DEQ "Ground Water Monitoring Well, Drilling, Construction and Decommissioning" guidelines (DEQ 1992).

## 3. Surface Water

Objective: To identify and characterize releases of hazardous substances from the facility to surface water.

Scope: The plan shall supplement previous investigations at the facility and shall identify and characterize all past, current, and potential impacts to surface waters from the facility.

Procedures: The plan shall be designed to determine the extent to which surface water may have been impacted by releases of hazardous substances at the facility; determine the nature and extent of surface water contamination; characterize the facility hydrology; determine the physical and chemical surface water characteristics relevant to the RI including flow characteristics; evaluate the potential for contaminant migration and gather the information necessary to identify hot spots of contamination. The plan shall include the proposed methodology for characterizing surface water.



#### 4. Sediments

Objective: To identify and characterize releases of hazardous substances from the facility to sediments.

Scope: The plan shall supplement previous investigations at the facility, shall identify and characterize all past, current, and potential releases of hazardous substances to sediments from the facility in a manner consistent with the Portland Harbor Sediment RI/FS. Characterization of the nature and extent of sediment contamination shall not be subject to this Agreement, but is contemplated to be completed through the Portland Harbor Sediment RI/FS.

Procedures: The plan shall be designed to identify sources of sediment contamination from the facility, and characterize release mechanisms from the facility to sediments. The plan shall include the proposed methodology for characterizing releases to sediments and as applicable shall utilize methodologies presented in the Portland Harbor Sediment Management Plan and the Portland Harbor Sediment Remedial Investigation and Feasibility Study Work Plan.

#### 5. Air

Objective: To identify and characterize any unpermitted release of hazardous substances to the air, from soil, surface water, or groundwater contamination at the facility.

Scope: The plan shall supplement previous investigations at the facility and shall identify and characterize all past, current and potential releases (e.g. contaminated soil or groundwater) of hazardous substances to air.

Procedures: The plan shall include the proposed methodology for evaluating air emissions using appropriate emission calculations and/or a field sampling program. The plan shall be designed to delineate the nature and extent of contamination, characterize the site climatology, determine the physical and chemical air characteristics relevant to the RI, evaluate the potential for contaminant migration to the Willamette River and surrounding areas and gather the information necessary to identify hot spots of contamination.

#### 6. Identification of Current and Reasonably Likely Future Land and Water Use

Objective: To identify current and reasonably likely future land and water uses in the locality of the facility not including those of the Willamette River.

Scope: The plan shall be designed to identify current and reasonably likely future land and water uses for the purposes of



identifying hot spots of contamination and conducting the baseline human health and ecological risk assessments based on OAR 340-122-080, DEQ Guidance, and the Portland Harbor Sediment Management Plan.

Procedures: The plan shall include the proposed methodology for identifying current and reasonably likely future land and water uses in the locality of the facility.

**D. SAMPLING AND ANALYSIS PLAN (SAP)**

Objective: To adequately document all sampling and analysis procedures.

Scope: In preparation of the SAP, the following guidance documents shall be utilized: Data Quality Objectives for Remedial Response Activities, EPA/540/G-87/004 (OSWER Directive 9355.0-7B), March, 1987; Test Methods for Evaluating Solid Waste, SW-846; and A Compendium of Superfund Field Operations Methods, EPA/540/P-87/001 (OSWER Directive 9355.0-14), December, 1987. The SAP shall address all topics listed in Environmental Cleanup Division Policy #760.000, Quality Assurance Policy.

Procedures: The work plan shall include a sampling and analysis plan (SAP). The SAP shall include quality assurance and quality control (QA/QC) procedures for both field and lab procedures. The SAP shall be sufficiently detailed to function as a manual for field staff.

**E. HEALTH AND SAFETY PLAN (HASP)**

Objective: To establish policies and procedures to protect workers and the public from the potential hazards posed by a hazardous materials site.

Scope: The HASP portion of the work plan shall comply with 29 CFR 1910.120 and OAR Chapter 437, Division 2.

Procedures: The HASP shall include a description of risks related to RI activities, protective clothing and equipment, training, monitoring procedures, decontamination procedures and emergency response actions.

**F. MAPS**

The work plan shall include a map or maps of the facility, which clearly shows facility topography, on-site structures, waste disposal areas and proposed sampling locations.



## **VI. EVALUATION AND IMPLEMENTATION OF SOURCE CONTROL MEASURES**

**Objective:** To implement necessary source control measures to address contaminant migration to the Willamette River that warrants removal action under OAR 340-122-070.

**Scope:** The plan shall gather sufficient information to evaluate, design and implement necessary source control measures.

**Procedures:** The plan shall be designed to and conducted to characterize all release mechanisms to the Willamette River. Characterization data shall be adequate to evaluate, design and implement necessary source control measures. Source control measures shall address contaminant migration to the river through overland transport, storm water runoff, free phase product migration, direct release, and/or dissolved groundwater contaminant migration that warrant removal action under OAR 340-122-070.

**Termination:** Respondent's obligations with respect to any source control measures implemented under this SOW shall terminate upon implementation of a remedy or entry of a consent decree, unilateral order, or other order that requires remedial action with respect to the facility that effectively serves to control that source.

## **VII. RISK ASSESSMENT WORK PLAN**

### **A. UPLAND HUMAN HEALTH RISK ASSESSMENT PLAN**

**Objective:** To evaluate the collective demographic, geographic, physical, chemical, and biological factors at the facility, for the purposes of characterizing current or reasonably likely future risks to human health as a result of a threatened or actual release(s) of a hazardous substance at or from the facility; documenting the magnitude of the potential risk at the facility; supporting risk management decisions; and establishing remedial action goals if necessary.

**Scope:** The human health risk assessment shall evaluate risk in the context of current and reasonably likely future land and water uses and in the absence of any actions to control or mitigate these risks (i.e., under an assumption of no action). The human health risk assessment portion of the work plan shall be developed based on the requirements specified in OAR 340-122-084, DEQ guidance, and the Risk Assessment Guidance for Superfund - Human Health Evaluation Manual Part A, United States Environmental Protection Agency (EPA) Interim Final, July 1989 (RAGS-HHEM). A suggested outline for the human health evaluation is given in Exhibit 9-1 of the RAGS-HHEM. The work plan should use this outline as a framework for discussing the methodologies and assumptions to be used in assessing the potential human health risks at the facility.



Procedure: The plan shall describe the different tasks involved in preparing the human health risk assessment. The human health risk assessment can be completed using either deterministic or probabilistic methodologies. If probabilistic methodologies are to be used, then Respondent shall discuss risk protocol with DEQ before the commencement of a probabilistic risk assessment.

The upland human health risk assessment shall be designed to achieve the following:

1. Develop appropriate exposure units considering the nature, extent, and distribution of contamination and the reasonably likely future land and water use in the locality of the facility;
2. Establish data quality objectives for each exposure unit identified;
3. Collect data appropriate to satisfy the data quality objectives for each exposure unit;
4. Identify contaminants of interest for each media of concern;
5. Develop exposure scenarios based on current and reasonably likely land use, facility features and populations potentially exposed;
6. Identify appropriate exposure factors for all exposure pathways to be evaluated;
7. Identify the appropriate toxicity factors for all exposure pathways to be evaluated; and
8. Quantify the risks to human health at the facility.

#### **B. UPLAND ECOLOGICAL RISK ASSESSMENT PLAN**

Objective: To evaluate the collective demographic, geographic, physical, chemical, and biological factors at the facility, for the purposes of characterizing current or reasonably likely future risks to the environment as a result of a threatened or actual release(s) of a hazardous substance at or from the facility; quantifying the potential risk at a facility; supporting risk management decisions; and establishing remedial action goals if necessary.

Scope: The ecological risk assessment shall evaluate risk in the context of current and reasonably likely future land and water uses and in the absence of any actions to control or mitigate these risks (i.e., under an assumption of no action). The ecological risk assessment will use a tiered approach (with four levels) to produce a focused and cost-effective assessment of risk. The ecological risk assessment work plan shall be developed based on the requirements specified in rule under OAR 340-122-084 and DEQ guidance.

Procedure: The plan shall describe the different tasks involved in preparing the ecological risk assessment. Ecological risk assessments may include a level I scoping plan; a level II screening plan; a level III baseline plan; and a level IV field



baseline plan. The level III and level IV baseline plans shall include an exposure analysis, an ecological response analysis, a risk characterization and an uncertainty analysis as required by OAR 340-122-084(3). The ecological risk assessment can be completed using either deterministic or probabilistic methodologies. If probabilistic methodologies are to be used, then Respondent shall discuss risk protocol with DEQ before the commencement of a probabilistic risk assessment.

Terrestrial habitats and receptors shall be evaluated through the following approach:

1. Complete a Level I Scoping assessment per ODEQ guidance for the terrestrial portion of the facility.
2. Make a preliminary determination of locality of the facility with respect to terrestrial receptors and current and potential future exposure to facility-related contaminants.
3. Determine potential for presence/absence of terrestrial threatened or endangered species.

#### **VIII. REPORTS**

##### **A. QUARTERLY REPORTS**

Two (2) copies of the Quarterly Reports shall be submitted to DEQ by the 15th day of the quarter following the reporting period. The quarterly reports shall summarize activities performed, data results collected or received and problems encountered or resolved during the previous quarter and activities planned for the upcoming quarter.

##### **B. REMEDIAL INVESTIGATION REPORT**

The Remedial Investigation report shall follow the outline in Table 3-13 (page 3-30 - 3-31) in the CERCLA RI/FS guidance, as applicable, and address the items listed below:

1. Executive Summary.

2. Introduction.

3. Facility Background.

A discussion and supporting maps of facility operations, facility description, facility setting, and current and reasonably likely future land and water uses.

4. Study Area Investigation.

A discussion of the investigative procedures and results for soil, groundwater, surface water, sediments and air.

5. Summary and Conclusions.



A discussion of the nature, extent, distribution and environmental fate and transport of contaminants in soil, groundwater, surface water, sediments and air.

6. Appendices.

Detailed information supporting the results of the Remedial Investigation shall be submitted in the Appendices of the report.

C. **RISK ASSESSMENT REPORT**

1. Human Health Risk Assessment Report

The results of the human health risk assessment should follow DEQ risk assessment guidance for human health and RAGS-HHEM Part A.

2. Ecological Risk Assessment Report

The main sections of the ecological risk assessment report should follow specific DEQ guidance for report formats at each level (I-III).

D. **REPORT DISTRIBUTION.**

1. Three (3) bound copies and one (1) unbound copy of all reports should be submitted to DEQ.
2. DEQ requests that all copies be duplex printed on recycled paper.





# Oregon

Theodore R. Kulongoski, Governor

## Department of Environmental Quality

Northwest Region Portland Office

2020 SW 4<sup>th</sup> Avenue, Suite 400

Portland, OR 97201-4987

(503) 229-5263

FAX (503) 229-6945

TTY (503) 229-5471

July 25, 2006

Schnitzer Investment Corporation  
C/O Jim Dragna  
Bingham McCutchen  
355 So. Grand Ave, 45<sup>th</sup> Floor  
Los Angeles, CA 90041

Re: Portland Harbor Superfund Site

Dear Mr. Dragna:

This letter provides you notice of a second opportunity to negotiate a settlement with the Oregon Department of Environmental Quality ("DEQ") regarding the Portland Harbor Superfund Site in Portland, Oregon.

By letters dated April 28, 2006, the U.S. Environmental Protection Agency ("EPA") requested that you and a number of other potentially responsible parties ("PRPs") become cooperating parties in the in-water investigation of hazardous substance contamination in Portland Harbor by entering an existing administrative consent order with EPA, and toward that end also encouraged you and the other PRPs to participate in the Lower Willamette Group ("LWG"), a group of PRPs currently performing the in-water investigation. The LWG requested that DEQ similarly provide an opportunity to LWG members and other PRPs to enter a state settlement recognizing in-water work performed under EPA's consent order.

By letter dated May 4, 2006, DEQ notified you of your potential liability for remedial action costs incurred by DEQ in connection with hazardous substance contamination of the Portland Harbor, provided you with DEQ's demand for payment of those costs, and notified you of an opportunity to enter negotiations with DEQ and other PRPs to settle your obligation to reimburse DEQ's costs and to become a cooperating party in the ongoing environmental investigation and study of cleanup remedies for the Portland Harbor contamination being overseen by EPA. The DEQ letter also explained that settlement negotiations were to proceed on a timeline enabling DEQ to issue a proposed consent judgment for public notice and comment in the summer of 2006 and enter the consent judgment with the state circuit court by the fall of 2006.

Following the DEQ letter, DEQ conducted or attended several settlement meetings with the PRPs. DEQ was able to reach an agreement in principle with members of the LWG as of June 14, 2006 -- DEQ's initial negotiating deadline -- but not with the non-LWG PRPs. DEQ agreed with the non-LWG PRPs to extend negotiation of the consent judgment until July 12, 2006, and, if other PRPs agreed in principle to the



consent judgment by that date, to provide a second 30-day public comment period on the proposed settlement with new parties beginning August 1, 2006.

On July 1, 2006, DEQ issued public notice of opportunity to review and comment on the proposed consent judgment with the LWG members, while continuing negotiations with non-LWG PRPs. Despite these continued negotiations, as of July 12, 2006 no other PRP had agreed in principle to join the proposed settlement. The non-LWG PRPs requested another extension of the public comment period, first, until October 27, 2006, and, then, until August 31, 2006. DEQ declined to do so, and instead offered to negotiate a second consent judgment with non-LWG PRPs on terms similar to the proposed consent judgment with the LWG members.

This letter notifies you in writing of that DEQ offer. If you desire to participate in this second set of settlement negotiations with DEQ, please respond by August 7, 2006 as described below.

For further background regarding the Portland Harbor Superfund Site, DEQ's outstanding remedial action costs, and your potential liability for those costs, please refer to DEQ's letter to you dated May 4, 2006.

The total amount of non-reimbursed past costs incurred by DEQ in connection with remedial activities at Portland Harbor through December 31, 2000<sup>1</sup> is \$1,902,171.31<sup>2</sup>. By its letter dated May 4, 2006, DEQ made demand for payment by you of this amount plus all authorized interest.

#### Settlement Opportunity

As with the proposed consent judgment with the LWG members, the settlement with other PRPs would be in the form of a consent judgment entered in state circuit court pursuant to ORS 465.325. The salient provisions of the consent judgment would require that signing PRPs: (a) pay DEQ's outstanding remedial action costs incurred through December 31, 2000; (b) reimburse DEQ's support agency costs under the in-water consent order administered by EPA; and (c) perform the in-water work under the EPA consent order, as demonstrated by a PRP entering the consent order with EPA or otherwise demonstrating that it is helping to fund the work (such as through membership in the LWG). In return, DEQ would provide a covenant-not-to-sue, right of contribution, and contribution protection regarding the same matters.

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<sup>1</sup> The EPA consent order requires reimbursement by PRP signatories to the consent order of costs incurred by DEQ as support agency after January 26, 2001. Generally consistent with that date and for ease of accounting, DEQ at this time is offering an opportunity to settle its outstanding costs incurred through December 31, 2000.

<sup>2</sup> This outstanding amount would be reduced by \$600,000 pursuant to the proposed consent judgment with the LWG members.



DEQ intends to conduct negotiations so that an agreement in principle to this second proposed consent judgment may be reached by September 27, 2006<sup>3</sup>. Consent judgment negotiations will be confidential, and, in accordance with ORS 465.325(4)(b), a PRP's participation in negotiations may not be considered an admission of liability.

If you elect to participate in this second settlement opportunity, please provide a written letter of your intent to engage in good faith negotiations, by August 7, 2006, mailed to: Kurt Burkholder, Senior Assistant Attorney General, Oregon Department of Justice, 1515 SW Fifth Ave., Suite 410, Portland, OR 97201.

The first negotiation meeting will be held on Thursday, August 10, 2006, 1:00 to 5:00 p.m. (PT), at the Oregon Department of Justice, 1515 SW Fifth Ave., Suite 410, Portland, Oregon. If you cannot attend in person, you may call in to a conference line at 888-422-7128, code 846603.

Questions regarding this letter may be directed to Mr. Burkholder at 971-673-1880, or at [kurt.burkholder@doj.state.or.us](mailto:kurt.burkholder@doj.state.or.us).

Thank you for your attention to this matter.

Sincerely,



Dick Pedersen  
Administrator  
Northwest Region

cc: Greg Christianson  
Bingham McCutchen LLP  
355 South Grand Avenue, 44<sup>th</sup> Floor  
Los Angeles, CA 90071-3106

Elizabeth McKenna, EPA

<sup>3</sup> This date is consistent with the extended deadline established by EPA for non-LWG PRPs to negotiate mutually-acceptable terms with the LWG for funding and implementation of the remainder of in-water work required under the existing EPA consent order.



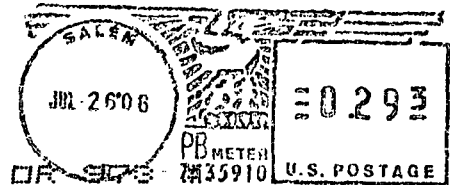
Oregon

Department of Environmental Quality  
Northwest Region  
2020 SW Fourth Avenue Suite 400  
Portland, OR 97201-4987

ADDRESS SERVICE REQUESTED

\*PRST FCM 07-27-06-SELEM OR 973

PREST  
FIRST CL



SCHNITZER INVESTMENT CORP

c/o JIM DRAGNA

BINGHAM MCCUTCHEN

355 SO. GRAND AVENUE, 45TH FLOOR

LOS ANGELES, CA 90071

BINGHAM MCCUTCHEN

FAUNEM3 90071



SCHN00271990



**SCHNITZER**  
INVESTMENT CORP.

July 21, 2003

Department of Environmental Quality  
2020 SW 4<sup>th</sup> Avenue, Suite 400  
Portland, OR 97201-4987

Attn: Tom Gainer

RE: Voluntary Cleanup Review Notice  
FTL a.k.a. Bay News Company property  
4285 NW Yeon Avenue  
Portland, OR 97210

Dear Mr. Gainer:

We are writing in response to your letter of June 25, 2003 to Linda Wakefield. Please note that Ms. Wakefield is no longer employed by Schnitzer Investment Corp; please correct your records accordingly.

Enclosed are documents in response to your request. Hereafter, any requests for information regarding the site should be sent directly to Martin Friedman, of FTL, Inc. He was shown as a "cc" on your letter. His title and address is as follows:

Martin L. Friedman,  
Regulatory Manager  
PO Box 10446 (97296-0046)  
4285 NW Yeon Avenue  
Portland, OR 97210-1417

Very truly yours,

  
Tom Zelenka

Vice President – Environmental Affairs

CAF/kjm

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1. **BACKGROUND INFORMATION:**

Facility name and address:

FTL Inc  
4285 NW Yeon Avenue  
Portland, Oregon 97210

Facility operator name, title, address, and phone number:

FTL Inc  
Mr. Martin Friedman  
4285 NW Yeon Avenue  
Portland, Oregon 97210  
(503) 227-6440

Property owner (if different from facility owner/operator) name, address, and phone number:

Schnitzer Investment Corp  
Mr. Tom Zelenka  
PO Box 10047  
Portland, Oregon 97296  
(503) 224-9900

Current use of site:

Local and regional intermodal trucking warehouse and distribution.

Past use of site:

Historical aerial photographs and reverse city directories indicate that the site was originally developed for the Guilds Lake Elementary school in the early 1940s. The site was used for a school until the early 1950s. From the early 1950s to 1970, the Portland School District used the original site building as a warehouse. A 1969 Sanborn Fire Insurance Map notes the presence of the Portland School District warehouse. The original building was demolished in 1970 and the site was briefly used to store structural steel or timber until 1973 when the existing trucking terminal buildings were constructed.

The site was developed as trucking terminal in 1973. Trucking terminal tenants and their approximate periods of occupancy are:

I-5 Freight (1973 - 1977)  
Time DC (1978 - 1981)  
Silver Eagle Trucking (1985 - 1989)  
ABF (1989 - 2001)  
FTL (2001 - present)



Size of site (in acres or square feet):

5.1 acres

Site security (is site completely or partially fenced, patrolled, etc.):

Site is fenced.

Land uses immediately surrounding the site boundaries (e.g., site is surrounded by agricultural or commercial land, homes to north, etc.):

The property is located in a designated industrial sanctuary zone and is surrounded by industrial manufacturing, warehouse, and trucking facilities.

**2. SITE MAP:**

Building names and their functions (past and present):

See figure in Attachment A.

All chemical and waste storage and disposal areas (buildings, ponds, landfills, piles, etc.); include inactive or abandoned areas.

See figure in Attachment A.

Outside process areas.

None on site.

Storage tanks.

See figure in Attachment A.

Waste treatment systems.

None on site.

On-site wells (water supply, monitoring, geotechnical, dry wells, abandoned wells).

None on site.

Transformers and capacitors on or adjacent to the site.

The only transformers are pole-mounted transformers owned by local power company and located on perimeter of the site. See figure in Attachment A.



### 3. CHEMICAL/WASTE HANDLING INFORMATION:

All chemicals used or stored at the site (polychlorinated biphenyls (PCBs), solvents, petroleum products, polycyclic aromatic hydrocarbons (PAHs), phthalates/plasticizers, metals, pesticides, acids, bases, etc.):

Diesel - 12,000 gallon, steel, double-walled above ground storage tank

Lubricating oil - 300 gallon steel tank inside shop building

Citrus-based solvent - 12 gallon parts cleaner inside shop building

Antifreeze - 55 gallon container inside shop building

Propane - 250 gallon steel tank

Welding gases (acetylene, argon, oxygen) - 5 to 10 20-pound pressure vessels inside shop building.

All waste products generated or stored at the site (waste solvents or oils, filter cake, spent plating solutions, metal grindings, etc.):

Used oil for recycling - (1) 250 gallon steel tank, (1) 500 gallon steel tank, both tanks located under cover at shop building

Used antifreeze for recycling - (1) 55 gallon drum

Approximate volumes of chemicals used and wastes generated per year, and maximum volume kept on-site:

Chemical/Waste	Volume per Year	Maximum on Site
Diesel	600,000 gallons	12,000 gallons
Lubricating oil	1,800 gallons	300 gallons
Citrus-based solvent	12 gallons	12 gallons
Antifreeze	250 gallons	55 gallons
Propane	1000 gallons	250 gallons
Welding gases	20 lbs	200 lbs
Used oil	5000 gallons	750 gallons

Any on-site chemical or waste-treatment systems (flocculation/filtration, incineration, chemical or physical treatment, volume reduction, etc.):

None.

Information on all past and present chemical and waste storage/disposal areas:

No known chemical or waste disposal areas on site.



Type, quantity, and destination of all wastes removed from site (i.e., metal wastes landfilled at county dump site, used solvents recycled by ...):

Office trash to local solid waste facility by Waste Management.

Used oil managed offsite for recycling by Emerald Petroleum Services.

Used antifreeze managed offsite for recycling by Emerald Petroleum Services.

Citrus-based solvent parts-cleaner units serviced by Chemsearch.

Any spills or other releases of hazardous substances that have occurred at the site during your operation or ownership:

As noted in Section 5, a limited and contained release of petroleum hydrocarbons occurred from an underground storage tank. The contaminated soil was completely excavated and removed from the site. No other releases have occurred during the current site ownership.

Any information you have about hazardous substances used, stored, or released at the site by prior owners or operators:

It is unknown the type or quantity of hazardous substances used or released by the Portland Public School District during their operations. Hazardous substances used, stored, or released at the site by prior trucking company operators are anticipated to be similar to those by current tenant.

#### **4. PERMIT INFORMATION:**

Identify all existing or expired regulatory permits. For each, provide information on the type of permit (NPDES, RCRA Interim Status, storm water, etc.), regulating agency (federal, state, sewerage agency), and issue and expiration dates:

NPDES General Storm Water Permit 1200-Z.  
Expiration date June 30, 2007.

FTL has implemented numerous storm water Best Management Practices (BMPs) at the site to prevent contaminant migration from the site in the storm water runoff. Current structural and operational BMPs include:

- Storage of hazardous chemicals under cover or in secure tanks
- Inverted discharge pipes and settling sumps on all catch basins
- Quarterly cleaning of all catch basins
- Filter cartridges critical catch basins
- Vehicles checked for leaks daily
- Roof runoff diverted directly to storm water drain lines
- Vehicle maintenance performed inside
- Covered concrete fueling pad drains to non-storm water sump

These BMPs, as well as the overall storm water management program, are described in the facility's Storm Water Pollution Control Plan. A copy of the plan has been provided to the City of Portland in compliance with the permit



requirements. FTL continues to assess potential additional BMPs including additional cartridge filters on additional catch basins, further restricting activities to covered areas of site, and periodic yard sweeping. These and other additional BMPs will be considered, as necessary, based on continued storm water monitoring.

Based on DEQ file information, it appears that DEQ has reviewed only the storm water monitoring data generated by ABF, the previous tenant at the site, in identifying FTL for site discovery. FTL has performed storm water sampling as required by the NPDES storm water permit since beginning operations at the site in 2001. The monitoring data during FTL operations show, with few exceptions, all chemical concentrations well below the 1200-Z permit benchmark concentrations. The only exceptions are the petroleum hydrocarbon concentrations measured in FTL's first monitoring event in June 2001 where the 10 mg/l benchmark was slightly exceeded and the May 2002 sampling event when copper and zinc concentrations exceeded the benchmarks.

Petroleum hydrocarbon concentrations in all other samples, including all subsequent samples collected by FTL after June 2001 and samples collected by the City in November 2001 and March 2001, have all been less than the benchmark values.

The copper and zinc exceedances on May 2002 were the result of an anomalous TSS concentration. The copper, lead, and zinc concentrations have been well below the permit benchmark concentrations in all of the other FTL samples, including those collected by the City in November 2001 and March 2001. The concentrations in the most recent sampling event were less than 1/2 of the benchmark concentrations with some of the concentrations only 1/80<sup>th</sup> of the benchmark concentration. The most recent FTL storm water monitoring data was recently submitted to the City of Portland with the annual storm water report.

Total suspended solid concentrations in the FTL storm water samples have exceeded the benchmark concentrations. In response, FTL has recently installed a filter cartridge in the catch basin at sampling point 2 and is considering filter cartridges at other catch basins. FTL has also determined that storm water sampling methods used to date are biasing upwards the measured concentrations. In particular, future sampling methods may collect samples down-pipe from the catch basin treatment features. FTL is continuing to assess other additional BMPs to further reduce the potential for TSS in the storm water runoff.

**5. SAMPLING/CLEANUP INFORMATION:**

Describe all environmental sampling/monitoring performed at site. Provide sampling results.

Storm water monitoring data has been provided to DEQ as per the NPDES storm water permit requirements. Other than soil and groundwater sampling performed to document removal of underground storage tanks (see below), no other environmental sampling/monitoring has been performed on the site.



Describe any soil excavations or removals, spill cleanups, groundwater treatment, etc., performed at site:

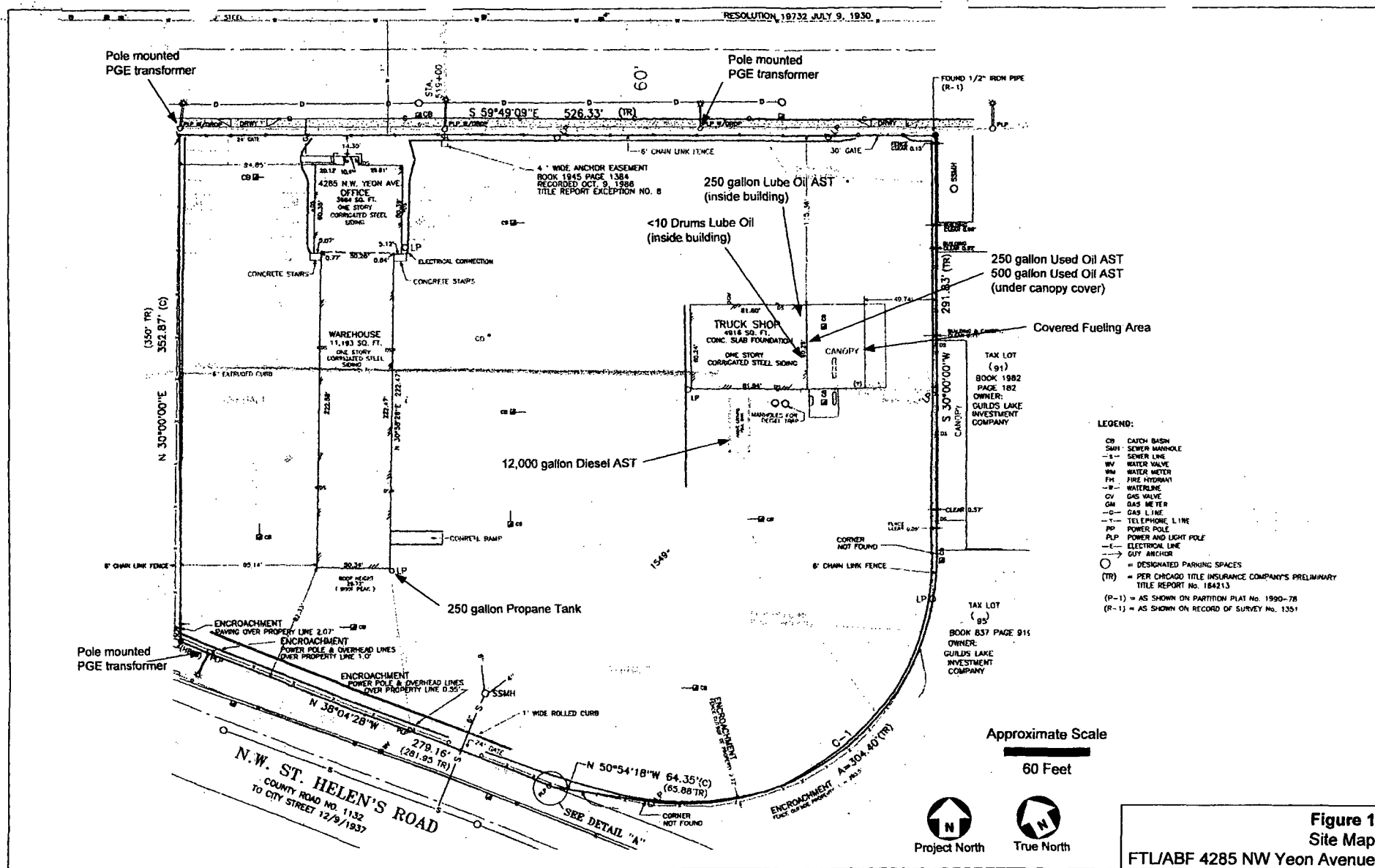
Ten underground storage tanks (USTs) were removed from three excavations on the site in 1989. Measured petroleum hydrocarbon concentrations in soil samples collected from the bottoms and sidewalls of the UST excavations were all less than applicable DEQ UST Matrix concentrations. Approximately 500 cubic yards of soil were excavated and disposed in an offsite solid waste landfill during the UST removals. Petroleum hydrocarbon concentrations in water samples collected from the excavations were all less than 2 mg/l. Benzene, toluene, ethylbenzene, and toluene were not detected in the water sample collected from the gasoline tank excavation. Neither chlorinated volatile organic compounds nor PCBs were detected in the soil sample collected from the waste oil tank excavation. The results of the UST removal, including the soil and groundwater sampling and analysis results were provided to DEQ. An August 6, 1990 letter from Andree Pollock at DEQ concludes that the UST decommissioning and cleanup met DEQ criteria and that no further action is necessary. A copy of the DEQ letter is provided in Attachment B.

A 500-gallon heating oil underground storage tank was removed in 1997 from near the southeast corner of the shop. No odors or other field evidence of releases from the UST were observed. No distress, holes, or corrosion was observed in the removed tank. A soil sample was collected from the UST excavation beneath the tank fill port and analyzed for petroleum hydrocarbons. Petroleum hydrocarbons were not detected in the soil sample. Groundwater was not encountered in the UST excavation. A letter summarizing the tank removal is provided in Attachment C.



## Attachment A







## Attachment B





## Department of Environmental Quality

811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1390 PHONE (503) 229-5696

August 6, 1990

Linda Wakefield  
Schnitzer Investment  
3200 NW Yeon  
Portland, Oregon 97210

Re: UST-Multnomah County  
Silver Eagle Trucking

Dear Ms. Wakefield:

We have completed our review of Petroleum Equipment Maintenance Company's report, dated October 4, 1989, concerning the underground storage tank decommissionings and contaminated soil cleanup conducted at the former Silver Eagle Trucking facility located at 4285 NW Yeon in Portland, Oregon. Since this information indicates that the decommissioning and cleanup met our current criteria, no further action is required at this time.

This decision is a result of our evaluation and judgement based on the regulations and facts as we now understand them, including:

- 1: Ten underground storage tanks were removed from the site and disposed of in a manner approved of by the Department.
- 2: Concentrations of total petroleum hydrocarbons (TPH) were detected in the waste oil and motor oil tank excavation and in the diesel tank excavation below the cleanup level of 500 parts per million (ppm) TPH established for the site.
- 3: Diesel contamination was discovered in the 12,000 gallon tank excavation above the cleanup level. Approximately 512 cubic yards of contaminated soil was removed from the site and taken to Short Mountain Landfill for disposal.
- 4: Confirmatory soil sample analyses detected a maximum of 100 ppm TPH remaining in the 12,000 gallon tank excavation.
- 5: Groundwater was encountered in the excavation. After soil removal, the excavation was de-watered and the water was allowed to recharge. A water sample was collected. No benzene, ethylbenzene, toluene, and xylenes were detected in the sample. The sample exhibited 0.9 ppm TPH.
- 6: Because there is no cleanup standard for TPH in groundwater at this time, groundwater is not utilized in this area, the source of the contamination has been removed, and because the remaining contamination will probably naturally degrade further over time, there does not



Ms. Linda Wakefield  
August 6, 1990  
Page 2

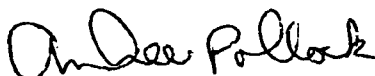
appear to be a significant environmental threat remaining at the site due to this release.

Information concerning the tank and contaminated soil removals should be maintained with the permanent facility records. We remind you that the current investigation applies only to the leaking underground storage tank systems and in no way transfers any liability to the State of Oregon.

Although we agree that the current conditions at the site do not appear to pose an environmental threat, the responsibility for environmental evaluation, reporting, and cleanup rests with the landowners.

If you have any questions regarding this matter, please contact me at (503) 229-6923.

Sincerely,



Andree Pollock  
UST Cleanup Specialist  
Northwest Region

cc: Environmental Cleanup Division, UST Cleanup Section  
Petroleum Equipment Maintenance Company  
P.O. Box 11569  
Portland, Oregon 97211-0566  
Attn: Bill Knutson

SCHN00272005



## Attachment C

SCHN00272006



# J & ASSOCIATES, INC.

14712 N.E. 3rd Avenue ■ Vancouver, WA 98685 ■ (360) 574-8338 ■ Fax: (360) 574-9387

Mr. Thomas Zelenka  
Manager-Legislative/Environmental and Public Affairs  
Schnitzer Investment Corporation  
3200 NW Yeon Avenue  
Portland, Oregon 97296-0047

March 13, 1997  
Project 1033

Re: Letter Report  
Heating Oil Underground Storage Tank Closure Project  
ABF Facility - Portland, Oregon

On behalf of Schnitzer Investment Corporation, J<sup>2</sup> & Associates, Inc. conducted an environmental assessment associated with the removal of one heating oil underground storage tank (UST) and associated piping located at the ABF Freight Systems property at 4285 NW Yeon Avenue, Portland, Oregon. Neither the current landowner or tenant knew the UST was present on site prior to its recent discovery.

The UST removed historically contained heating oil and was approximately 500-gallons in capacity. The UST was not a source of heating oil for the existing tenant. The age of the UST is unknown. The UST and associated piping were removed on March 6, 1997, by a licensed Oregon contractor (Dan Obrist - 6431 S.E. Jenne Road - Portland, Oregon).

The UST removed was located on the northeast portion of the property, approximately 15 feet south of the maintenance building. The removal was completed by over excavating around the tank and extracting the component using a trackhoe. Prior to removing the tank, residual fluids (estimated 99% water and 1% product) were pumped from the component by Oil Rerefining personnel and placed into a pumper truck. Tank liquids were taken by pumper truck for recycling to Oil Rerefining's facility at 4150 North Suttle Road in Portland, Oregon.

The tank was thoroughly inspected when removed. No holes or corrosion pitting were observed on the tank exterior. Noticeable hydrocarbon-like odors were not encountered during the excavation of the heating oil UST. The tank and associated piping were taken off site on March 6, 1997, to be scrapped at a nearby facility.

The tank excavation measured approximately 15 feet by 17 feet by 8 feet in depth. The tank excavation material and native material along side walls and beneath the tank consisted of silty fine to medium sand. Groundwater was not encountered within the excavation. A single soil sample was collected from native material, approximately one foot ( 9 feet below ground surface) beneath the fill port area of the removed UST. The excavation was backfilled with the sandy material surrounding the UST and additional clean pit run material, after the soil sample was collected. The trackhoe compacted the material placed in the excavation. Site photos documenting the UST removal are attached.

SCHN00272007



The soil sample collected was obtained from the excavation using the trackhoe bucket. The sample was then collected directly from behind the trackhoe bucket teeth<sup>1</sup>, using clean sampling equipment, and placed within a clean laboratory supplied sample jar. The soil sample was then placed into a cooler for transport to the laboratory using standard chain-of-custody procedures.

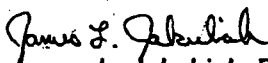
Soil analysis was performed by Columbia Analytical Services, Inc. of Kelso, Washington. The sample was analyzed for total petroleum hydrocarbons as diesel (TPH-D) using Oregon Department of Environmental Quality (DEQ) Method 8015 modified. Results of the analysis indicates TPH-D concentrations in soil are reported as not detected at or above the reported detection limit (10 ppm). Analytical results, the corresponding chain-of-custody documentation, and site photos are attached.

Based on the observations made during the UST removal activities and based on the analytical results obtained, J<sup>2</sup> & Associates recommends no further action for the site. Because the tank removed was intact and nonleaking and is a nonregulated heating oil tank, DEQ notification is not necessary.

We appreciate the opportunity to be of service to Schnitzer Investment Corporation. Please contact us should you have any questions about this report.

Sincerely,

J<sup>2</sup> & Associates, Inc.

  
James L. Jakubiak, R.G.  
Project Manager

Attachments: Site Photos  
Laboratory Report

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<sup>1</sup> To minimize the potential for cross contamination, every effort was made to collect the sample from soil which did not come in direct contact with the backhoe bucket.

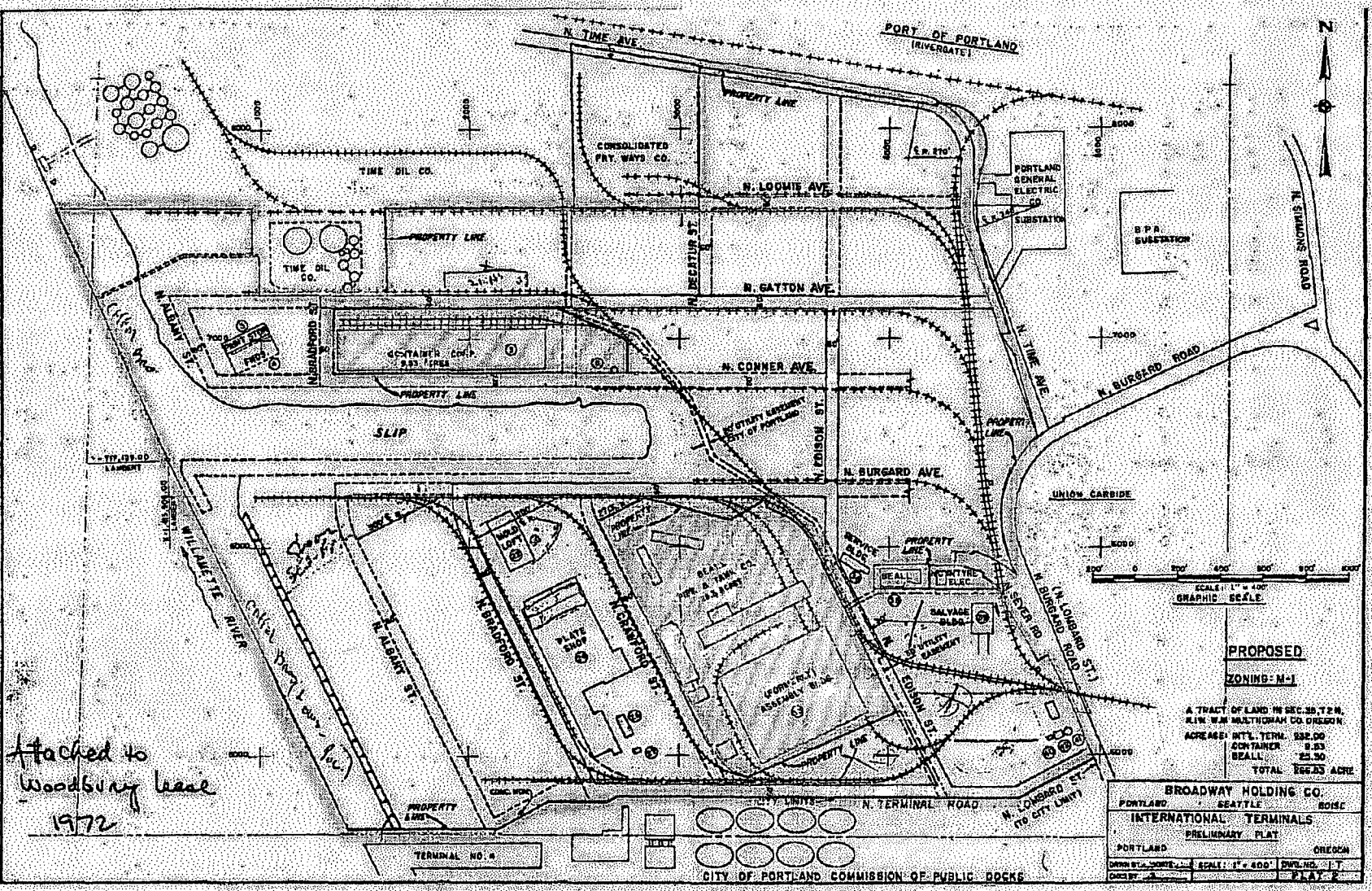




SCHN00272014



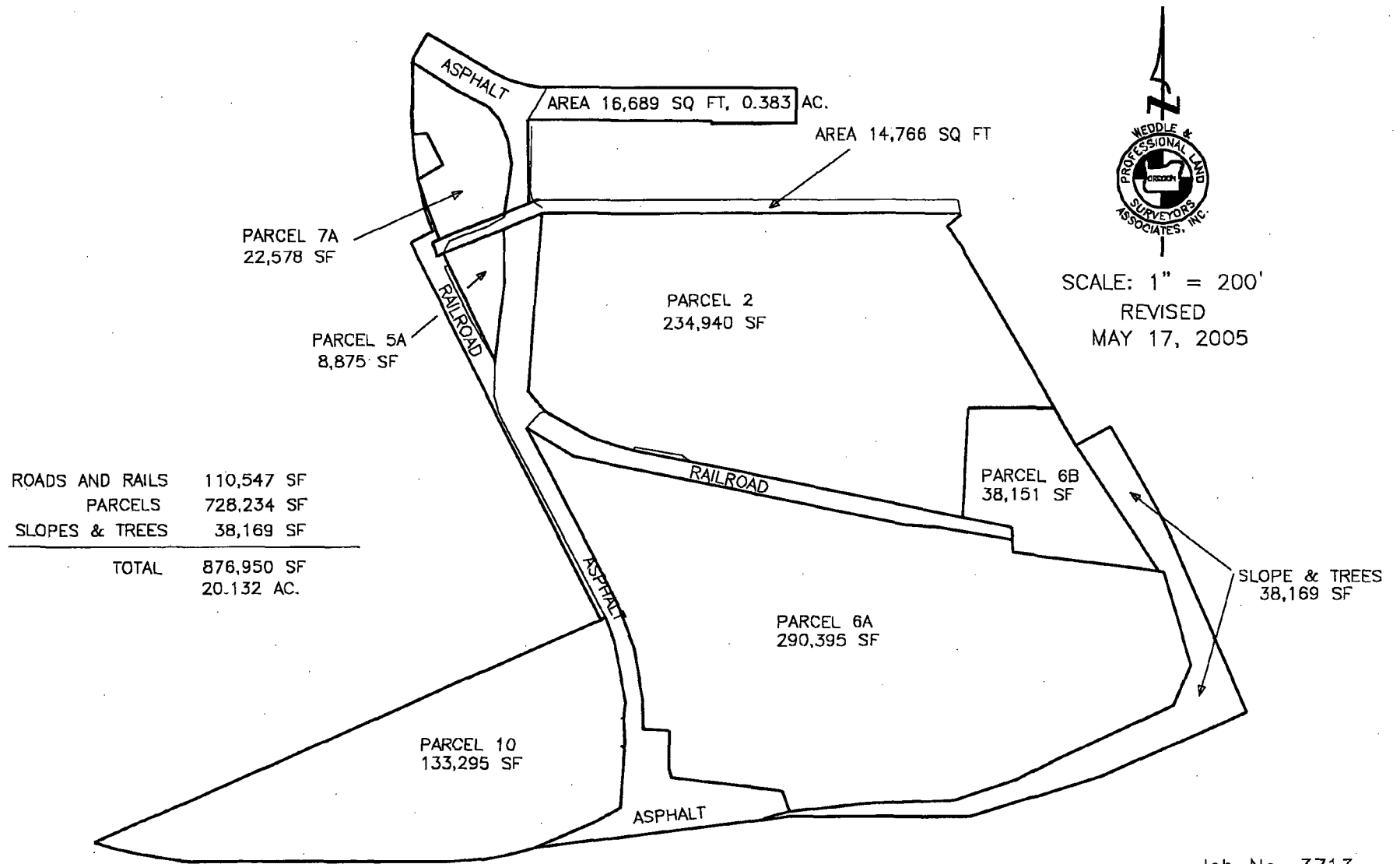
Exhibit "A"



Attached to  
Woodbury lease  
1972



# LOT 1, BIP 20.132 AC.



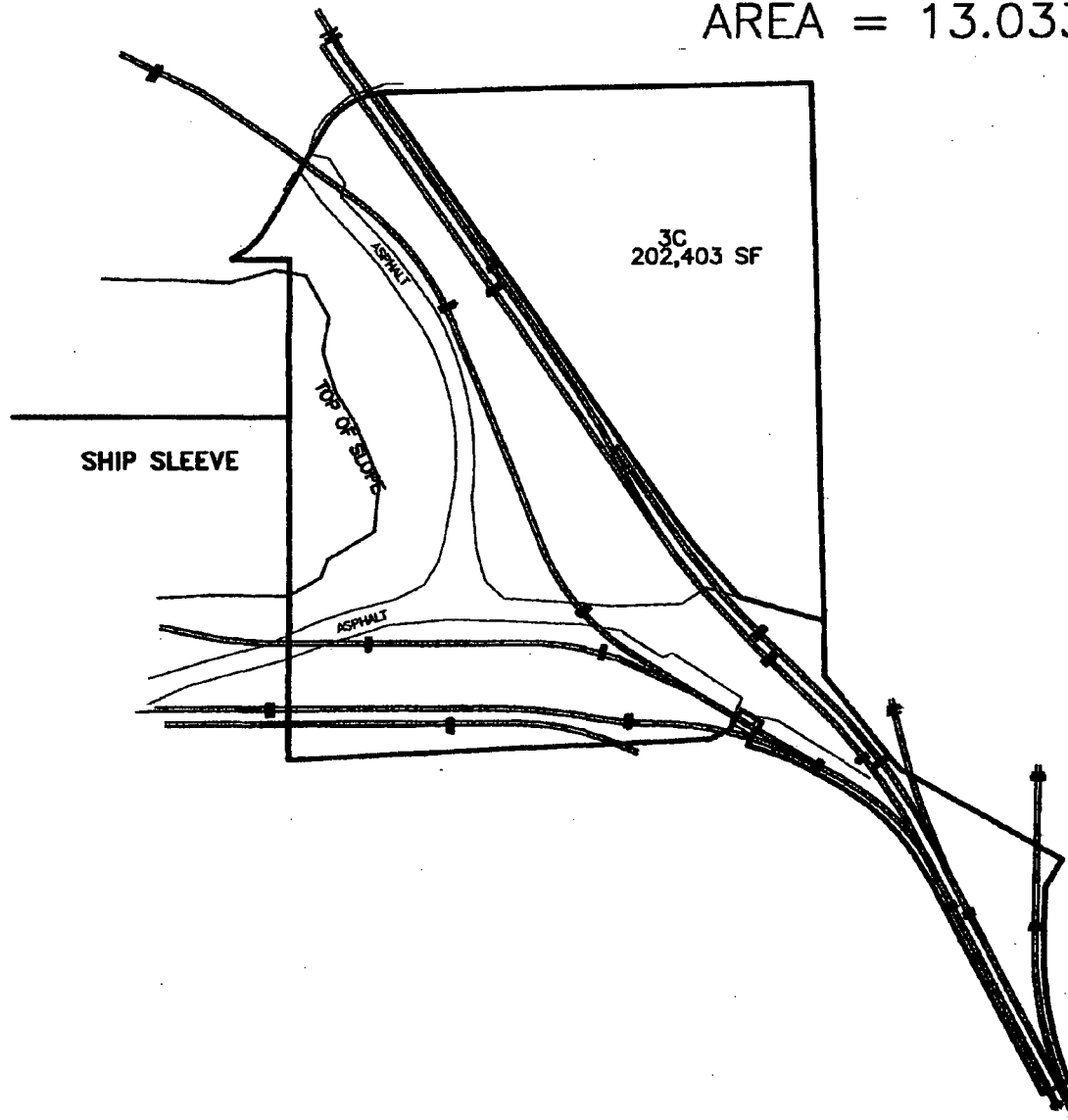
ROADS AND RAILS	110,547 SF
PARCELS	728,234 SF
SLOPES & TREES	38,169 SF
<b>TOTAL</b>	<b>876,950 SF</b>
	<b>20.132 AC.</b>

Job No. 3713  
LOT1 BIP

SCHN00272016



LOT 2, BURGARD INDUSTRIAL PARK  
AREA = 13.033 ACRES



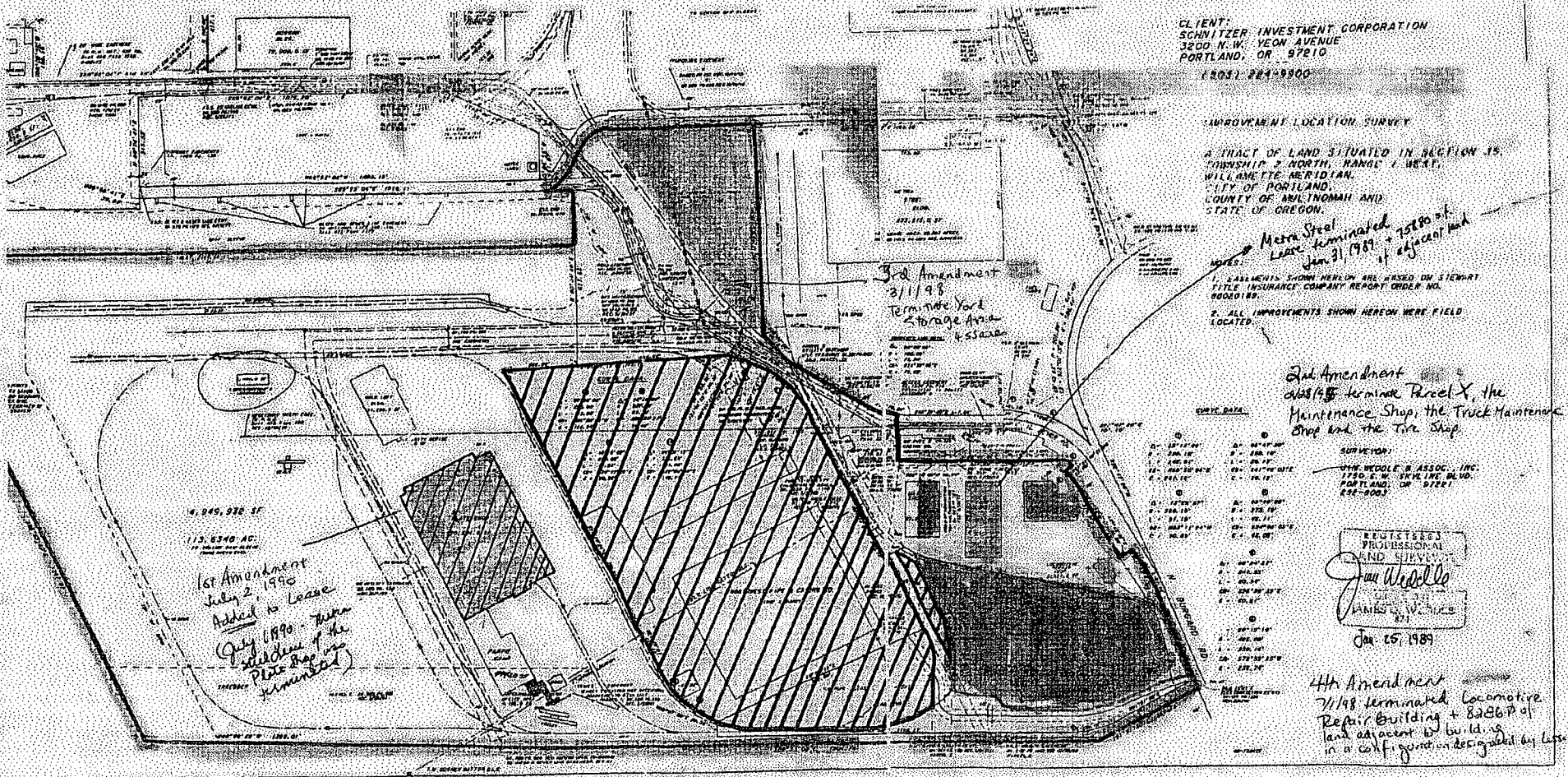
1" = 200'  
REVISED  
FEB. 3, 2005

Job No. 3383L2

IN 3713

SCHN00272018









1600 Pioneer Tower  
888 SW Fifth Avenue  
Portland, Oregon 97204  
503.221.1440

MAX M. MILLER, JR.

503.802.2030  
FAX 503.972.3730  
max@tonkon.com

March 23, 2007

Mrs. Joan P. Snyder  
Stoel Rives LLP  
Suite 2300  
900 SW Fifth Avenue  
Portland, OR 97204

Re: Gunderson / Schnitzer

Dear Joan:

Enclosed is the latest filing with DEQ regarding the former Schnitzer Yard portion of the Gunderson site, the Area 3 Remedial Action proposal.

Sincerely,

A handwritten signature in black ink, appearing to be 'Max M. Miller, Jr.'.

Max M. Miller, Jr.

M-M/JF  
Enclosure

Copy w/o encl: Howard Werth  
David King

002402\00183\751815 V001

RECEIVED  
STOEL RIVES LLP  
By 04/3/2007  
cc: Tom Zelenka  
Ross Lielce  
M. Cusma  
J. Bragna

SCHN00272048



# GUNDERSON, LLC

## Area 3 Remedial Action

15050 SW Koll Parkway, Suite L  
Beaverton, OR 97006

503) 644-9447  
Fax (503) 643-1905

TO: Dana Bayuk  
Oregon Department of Environmental Quality  
Lower Willamette Section

March 19, 2007  
S090445 / 4.3

CC: Howard Werth, Gunderson  
Robert A. (Rusty) Bridgers, Gunderson  
Max M. Miller, Jr., Tonkon Torp, LLP

FROM: David Earl King, RG, Senior Professional Geologist,

Peter J. Shingledecker, PE, Professional Engineer,

**Subject: Recommendations for Remedial Action  
based on "Focused Remedial Investigation and Preliminary Upland Source  
Evaluation, Gunderson Area 3, Former Schnitzer Steel Yard" dated June 2006.**

Squier | Kleinfelder submitted the "Focused Remedial Investigation and Preliminary Upland Source Evaluation, Gunderson Area 3, Former Schnitzer Steel Yard" (FRI) report in June 2006 to the Oregon Department of Environmental Quality (DEQ). In that report it was stated that a Remedial Action Plan (RAP) would be submitted under separate cover. This memorandum presents a summary of the recommendations that Kleinfelder will be advancing as part of the Area 3 RAP.

Past site activities have left soil conditions that require a remedial action in Gunderson's Area 3. The June 2006 FRI (and previous documents) provided an assessment of the contaminants of potential concern (COPCs) encountered in Gunderson's Area 3. The COPCs have been selected based on comparisons to Screening Criteria presented in DEQ's document *Portland Harbor Joint Source Control Strategy (JSCS)*, dated December 2005. COPCs in soil, identified at concentrations above the JSCS Screening Criteria, include the following:



- arsenic
- lead
- zinc
- manganese
- copper
- polynuclear aromatic hydrocarbons (PAHs) (most notably benzo(a)pyrene)
- nickel
- polychlorinated biphenyls (PCBS)
- chromium
- barium
- cadmium
- antimony
- bis(2-ethylhexyl) phthalate
- mercury
- selenium
- oil and other heavy petroleum hydrocarbons
- dibenzofuran

It should be noted that a number of the metals listed as COPCs above are native elements that occur in the natural environment. Specifically, arsenic, barium, and zinc have published background concentrations that are significantly above one or more of the cited criteria used in this evaluation. Accordingly, those three metals may not be considered suitable indicators of contamination, and likely do not rise to the level of contaminants of concern (COCs).

For the purpose of planning remedial actions, Gunderson's Area 3 has been segregated into six Operable Units. The six Operable Units, their associated concerns, and the proposed remedial actions to address impacted soil and groundwater at the site, are discussed in the sections presented below. In addition to the proposed remedial action presented in the *FRI* for each Operable Unit, an evaluation of the effectiveness of the storm water system was initiated as part of the *FRI*. Additional work, conducted since the *FRI* was submitted, has included an extensive sampling and analysis program of the storm water system which has focused on catch basin solids and discharged storm water. The 2006 - 2007 catch basin / storm water evaluation is still underway, however, some preliminary (unpublished) findings will be included in this memorandum. Historical data summarized in the 2006 *FRI* indicate that some of the COPCs are still present in the discharged storm water at concentrations above the screening criteria listed in the *JSCS*. Our recommendations for modifications to the storm water system are also presented below.

#### **1. OPERABLE UNIT 1 (WILLAMETTE RIVER SHORELINE AND BANK) ISSUES.**

The surface and shallow soils (0 to 3 feet below ground surface (bgs)) in this Operable Unit contain COPC concentrations above DEQ Screening Levels for Human Health, Ecological Health, and Source Control. The higher concentrations of COPCs (primarily PCBs, lead, and benzo(a)pyrene) in this Operable Unit were identified at the most upstream end of Area 3 and at



the most downstream end of Area 3. In addition, concentrations of COPCs above applicable screening levels were encountered at various points along the shoreline and riverbank. The presence of the COPCs in the riverbank area indicates a potentially complete exposure pathway for benthic and aquatic ecological receptors. It is not cost-effective to conduct additional investigative work to determine what concentrations these COPCs would rise to the level of COCs. Based on these findings, Operable Unit 1 includes the complete shoreline and riverbank section of Area 3.

#### **Recommended Remedial Action for Operable Unit 1**

We recommend that the deleterious soil containing COPCs (down to an approximate depth of 3 feet bgs) above the mean high river stage elevation be removed from the riverbank and lower shoreline. The excavated riverbank soil should be replaced with clean, engineered fill and the riverbank armored to prevent further erosion. The inclusion of a geotextile barrier between the remaining riverbank soil and the armoring would also appear to be prudent to limit the possible seepage of water from upland sources.

#### **2. OPERABLE UNIT 2 (VICINITY OF FORMER AUTOMOBILE CRUSHER) ISSUES**

Operable Unit 2, located in the upstream and nearshore end of Area 3, contains soil with concentrations of COCs that exceeded the DEQ Human Health Screening Levels for PCBs and lead. Benzo(a)pyrene did not exceed the Ecological Screening Criteria, nor the Source Control Screening Criteria. Potentially complete exposure pathways exist for Occupational and Construction / Excavation Receptors from exposure to the COPCs in surface soils. Concentrations of other compounds (such as copper, manganese, and zinc) exceeded the Ecological and Source Control Criteria while not exceeding the Human Health Criteria. Concentrations of diesel (maximum of 44,400 milligrams per kilogram (mg/Kg)) and heavy oil (maximum of 65,300 mg/Kg) were also detected in Operable Unit 2. In addition, perched groundwater that appears to be in contact with the petroleum (diesel and oil) contamination has been identified in Operable Unit 2. Potentially complete exposure pathways also exist for Construction / Excavation Receptors from exposure to the COPCs in shallow and intermediate depth soils. Based on our evaluation of generic Risk-Based Concentrations (RBCs), exposure to volatilizing COPCs is not a complete pathway.

#### **Recommended Remedial Action for Operable Unit 2**

Kleinfelder recommends that soil with concentrations of COPCs that exceed a value equivalent to 10 times the Human Health Screening Level for an individual COPC be considered a COC and excavated and removed from the site for proper disposal. Pretreatment of the soil may be required prior to disposal. Based on our understanding of the vertical distribution of contaminants in the soil, the depth of the soil excavation will probably extend to the perched



groundwater (approximately 9 feet bgs) in the former vicinity of the automobile crusher. Clean, engineered fill will need to be imported onto the site to backfill the excavation if no suitable onsite fill material is identified.

Exposure to the remaining soil in Operable Unit 2 should be restricted so that no further human or ecological contact will occur under normal operating circumstances. This may involve soil stabilization, removal, encapsulation, or a combination of these or similar technologies.

### **3. OPERABLE UNIT 3 (FORMER CRANE AND STORAGE AREA) ISSUES**

Operable Unit 3 also adjoins the Willamette River Bank (Operable Unit 1) and adjoins Operable Unit 2 on the downstream side. Impacts to soil in Operable Unit 3 are similar in nature to Operable Unit 2, but do not appear to extend as deep below the ground surface. Unique to the shallow soil contamination in Operable Unit 3 is the presence of mercury. Potentially complete exposure pathways exist for Occupational and Construction / Excavation Receptors from exposure to the COPCs in surface soils.

#### **Recommended Remedial Action for Operable Unit 3**

Kleinfelder recommends that soil with concentrations of mercury greater than 100 mg/Kg be excavated and removed from the site for proper disposal. Pretreatment of the soil may be required prior to disposal. Clean, engineered fill will need to be imported onto the site to backfill the excavation if no suitable onsite fill material is identified. Upon completion of this excavation, the soil with the highest concentrations of COCs will have been removed.

Exposure to the remaining soil in Operable Unit 2 should be restricted so that no further human or ecological contact will occur under normal operating circumstances. This may involve soil stabilization, removal, encapsulation, or a combination of these or similar technologies.

### **4. OPERABLE UNIT 4 (FORMER STEEL SHREDDER VICINITY) ISSUES**

Operable Unit 4 adjoins Operable Unit 2 and includes the land further from the Willamette River. Contamination in Operable Unit 4 is generally limited to the surface and shallow soils. Potentially complete exposure pathways exist for Occupational and Construction / Excavation Receptors from exposure to the contaminants in surface soils, but based on the information presented in the 2006 *FRI*, the DEQ Source Control Screening Criteria were not exceeded in Operable Unit 4 soils.



#### **Proposed Remedial Action for Operable Unit 4**

Exposure to the contaminated surface soil in Operable Unit 4 should be restricted so that no further human or ecological contact will occur under normal operating circumstances. This may involve soil stabilization, removal, encapsulation, or a combination of these or similar technologies.

#### **5. OPERABLE UNIT 5 (THE NORTH END) ISSUES**

Operable Unit 5 includes the area where the rail tracks enter and exit Area 3. Contamination in Operable Unit 5 is generally limited to the surface soil (0 to 3 feet bgs). Potentially complete exposure pathways exist for Occupational and Construction / Excavation Receptors from exposure to the contamination in surface soils, but similarly to Operable Unit 4, based on the information presented in the 2006 *FRI*, the DEQ Source Control Screening Criteria were not exceeded by soils in Operable Unit 5.

#### **Proposed Remedial Action for Operable Unit 5**

Exposure to the contaminated surface soil in Operable Unit 5 should be restricted so that no further human or ecological contact will occur under normal operating circumstances. This may involve soil stabilization, removal, encapsulation, or a combination of these or similar technologies.

#### **6. AREA 3 GROUNDWATER ISSUES**

In addition to the COPCs identified for soil; diesel, beryllium, and two chlorinated benzene compounds may be considered COPCs for water only. The two chlorinated benzenes are chlorobenzene and 1,4-dichlorobenzene. Based on a comparison of the COPC concentrations in groundwater to the generic RBCs and calculated, site-specific target levels, for the applicable exposure pathways, volatilization of COCs to indoor and outdoor air does not appear to be a concern.

Potentially complete exposure pathways exist for Excavation Workers through dermal contact in areas of perched groundwater, but not ingestion, from exposure to the COCs in groundwater. This is based on the understanding that there is no consumptive use of groundwater at the site. In addition, the contaminated phreatic groundwater is located beyond the typical excavation depth (greater than 15 feet below ground surface).

The discharge of contaminated groundwater to surface water could result in a potentially complete exposure pathway for Occupational Receptors as well as benthic and aquatic ecological receptors. However, because the concentrations detected do not exceed the appropriate Ecological Screening Levels, no remedial action appears warranted to address this



potential exposure pathway.

#### **Proposed Remedial Action for Groundwater**

Based on the information presented above, Kleinfelder does not believe that an active groundwater remedial program is warranted for Gunderson's Area 3. However, it does appear beneficial to continue to monitor the groundwater quality in the Area 3 monitoring wells utilizing the existing monitoring well network.

#### **7. STORM WATER SYSTEM ISSUES**

Outfall WR-377 (formerly identified as OF-21) was repaired in 2005. New "Best Management Practices" (BMPs) were implemented with the construction of the new Marine Engineering Building. The new BMPs for the Outfall WR-377 system include the installation of four new catch basins (identified as CB-5, CB-6, CB-7, and CB-8). A comparison of the analytical data from samples of catch basin solids collected from the catch basin filters to the catch basin solids collected directly from inside the catch basins indicates that the new Outfall WR-377 system may be effective in removing polynuclear aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). The presence of select metals may still be an issue in the solids retained by catch basins CB-5 and CB-6; however, the metals concentrations are relatively low. The filters installed in two of the older catch basins (CB-1 and CB-2) appear to be less effective in removing metals, PAHs, and PCBs from storm water entering the catch basins.

The Outfall WR-147 system (formerly identified as OF-22 system) includes a 4-inch black PVC pipe (identified as OF-22P) that discharges into the steel tub located on the riverbank. OF-22P drains storm water from around Vault 15 and has historically been found to discharge PCB-contaminated water. The preliminary information from analysis of the catch basin solids in the Outfall WR-147 system suggests that the filters in catch basins CB-1 and CB-2 may be ineffective in reducing PCBs, bis(2-ethylhexyl) phthalate (BEHP), PAHs, lead, manganese, and mercury. The filter in Outfall WR-147 system's catch basin CB-3 does appear to be reducing the concentrations of PCBs, BEHP, and PAHs in the storm water discharge, but does not appear to be eliminating these COPCs. However, the transport and discharge of some important metals (arsenic, copper, manganese, and nickel) does not appear to be affected by presence of the catch basin filter.

To better manage storm water at the site, Kleinfelder recommends the discharge point (terminus) for Outfall WR-148 (formerly identified as OF-23) be rebuilt. At a minimum, the terminus area should be cleared and the steel tub repositioned. The steel tub is currently upended and resting partially down slope of the riverbank. In addition, the preliminary information from the 2006 – 2007 storm water evaluation suggests that the filters in catch basins CB-1 and CB-2 are ineffective in reducing the accumulation of PCBs, BEHP, PAHs, and some



key metals in the catch basins. It may be beneficial to rebuild this portion of the storm water system entirely. This effort may include redirecting the storm water from Outfall WR-148 to Outfall WR-147 and combining the treatment efforts, which would also reduce the number of outfalls on the facility.

#### **Recommended Storm Water Remedial Action**

Kleinfelder recommends that Gunderson continue their efforts to upgrade their storm water system. Upgrading the storm water system to mitigate the discharge of COC-bearing storm water would significantly contribute to Gunderson's overall Upland Source Control strategy. In order to accomplish the goal of reducing the concentrations of COCs in discharged storm water, more aggressive "Best Management Practices" (BMPs), compared to the current filters, will also be necessary. Kleinfelder is currently researching technologies to achieve this goal.

We further recommend that Gunderson consider rebuilding the storm water conveyance piping for Outfalls WR-147 and WR-148 so that the two systems are integrated into one system. The upgrade should also include installation of an advanced filtration system, presumably in the vicinity of Outfall WR-147.

If you have questions concerning this submittal please do not hesitate to call.



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# FIRST CLASS MAIL



900 S.W. Fifth Avenue, Suite 2600  
Portland, Oregon 97204

JPS212

Mr. James J. Dragna  
Bingham McCutchen LLP  
355 South Grand Avenue, Suite 4400  
Los Angeles, CA 90071-3106

RECEIVED  
MAR 27 2007  
BINGHAM MCCUTCHE  
SUPPORT

SCHN00272056



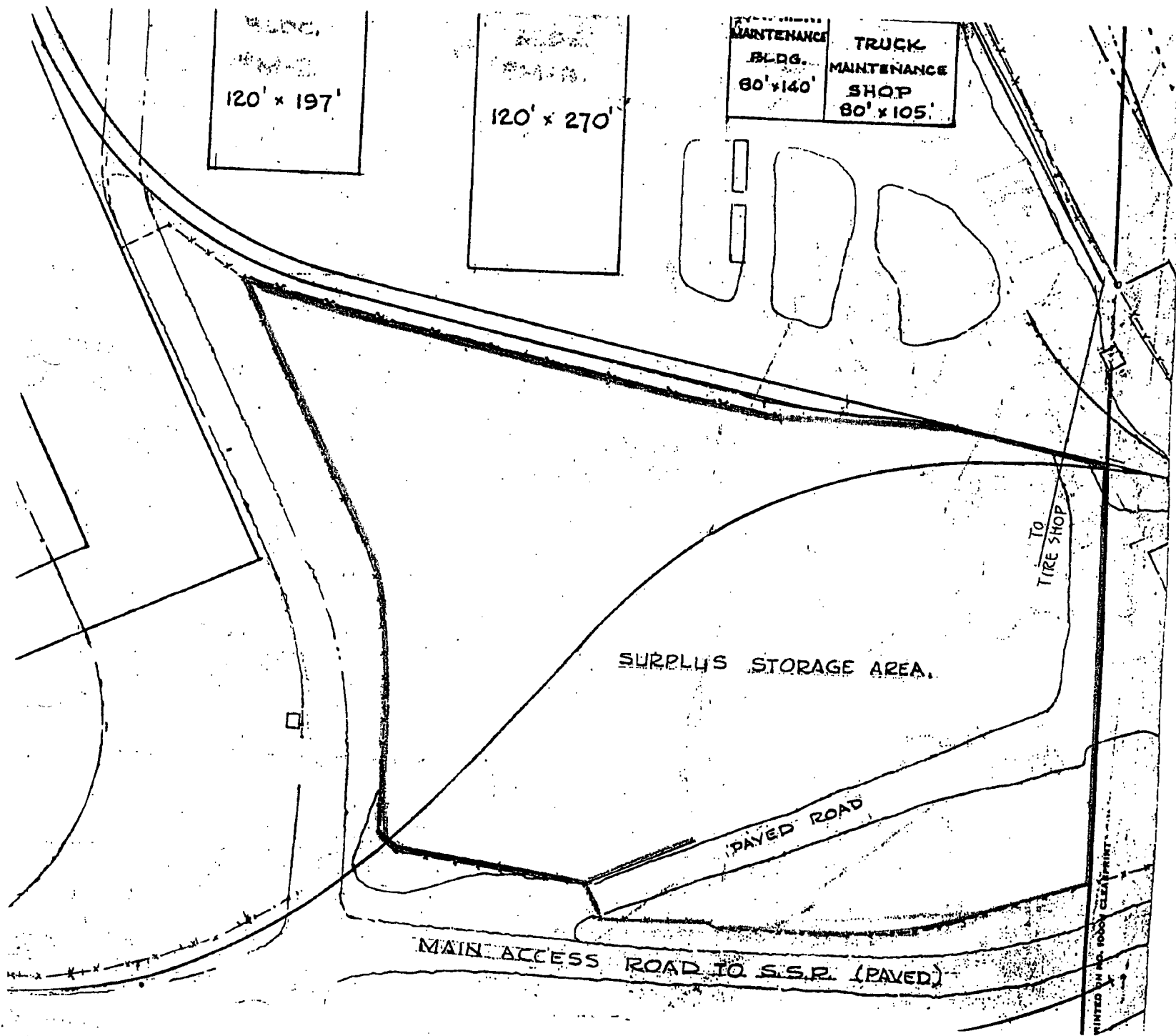


EXHIBIT "A"



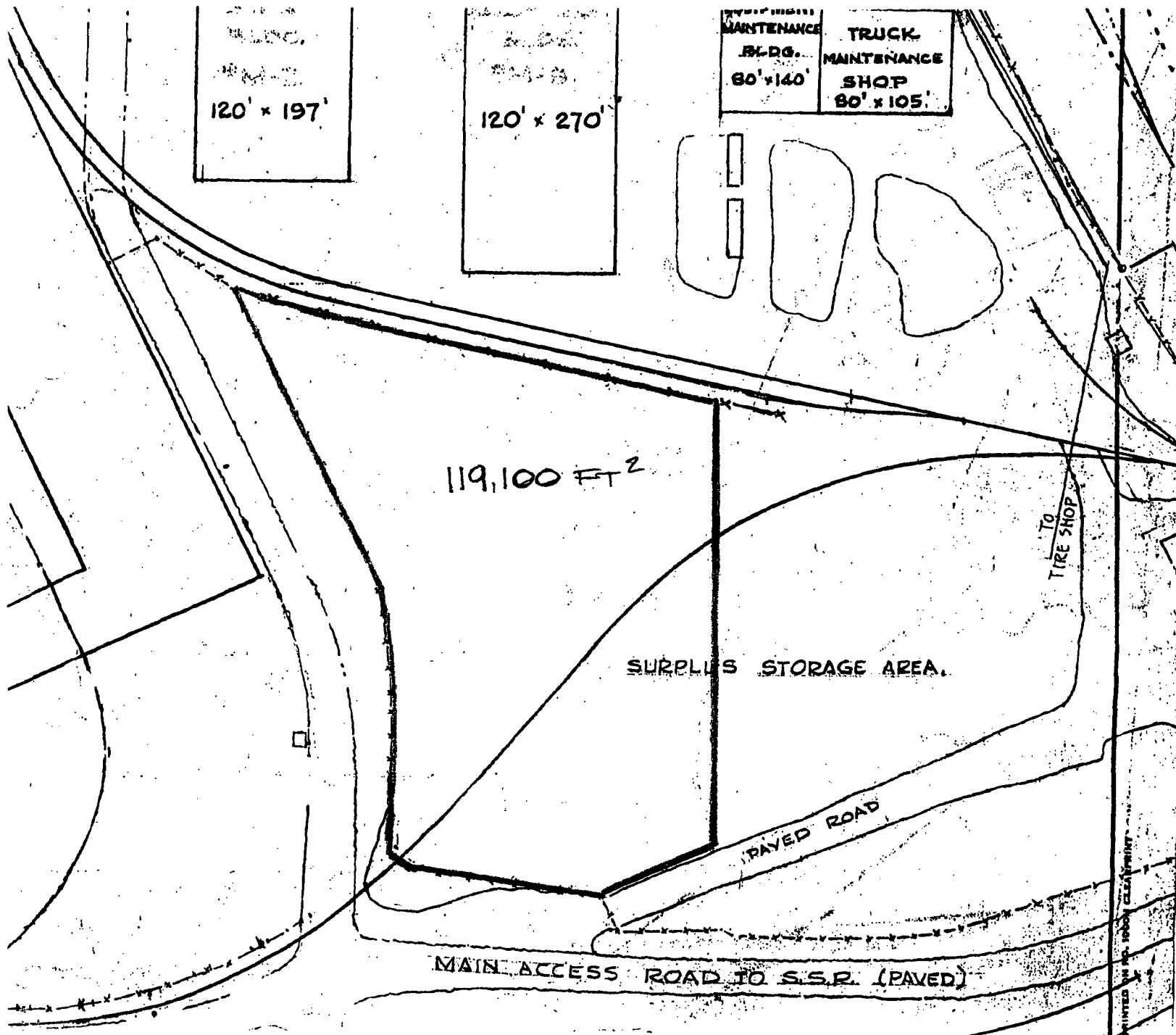


EXHIBIT "A"



**Northwest Pipe  
Parcel 3C**

Document	Date	Amendment #	Land Description	Land Area (Acres)	Monthly Rent	Escalations	Term	Comments
Lease	1/22/1996		Lot 8	3.656	3,838.80	None	month to month	Terminated by letter of October 25, 1996 effective 11/30/1996
Lease	2/17/1997		Lot 8	3.656	5,118.40	None	month to month	
Amendment	7/10/1997	1	Lot 7 & 8	6.757	9,459.80	None	month to month	
	<del>4/1</del> 1998	2	Part of Lot 2	4.55	6,370.00	Annual CPI	5 years	Termination on 3/31/2003 <del>4/1/98</del>
	3/18/1999	3	Part of Lot 2	4.55	6,490.41			Established rent pursuant to CPI increase clause
	4/14/2000	4	Part of Lot 2	4.55	6,685.12			Established rent pursuant to CPI increase clause
	3/28/2001	5			6,885.67			Established rent pursuant to CPI increase clause
	4/25/2002	6			7,055.75			Established rent pursuant to CPI increase clause
	<del>3/31</del> 2004	7			7,280.00		Month to Month	Establishes rent

6/2004 Termination per e-mail notice.

SCHN00272326



**Susan J. Davidson**

---

**From:** rridgley@nwpipe.com  
**Sent:** Wednesday, March 24, 2004 9:42 AM  
**To:** Susan J. Davidson  
**Subject:** Notice of Intent to Vacate Parcel 3C

Susan,

Per our verbal agreement I am informing you of our intent to vacate the property designated as 3C on the map you provided last year. This is the 4.35 acre parcel located next to the Ryerson Co. Craneway. Although we intend to be off the property by the end of April, we will continue to pay rent through June of 2004 per our mutual 3-month notice agreement. As we discussed, Northwest Pipe has spent approximately \$70,000 in leasehold improvements to this property. Most of this was in rock and the associated labor to fill and level the land. You have indicated your willingness to reimburse NWP for leasehold improvements. Please let me know your thoughts on this matter. I look forward to hearing from you.

Randy Ridgley  
Operations Manager  
Northwest Pipe Co.  
Portland, Or.  
(503) 285-1400 Ext. 2345



## SEVENTH EXTENSION OF LEASE

DATED: March 31, 2004

BETWEEN: SCHNITZER INVESTMENT CORP.,  
an Oregon corporation ("Landlord")

AND: NORTHWEST PIPE COMPANY,  
an Oregon corporation ("Tenant")

### Recitals:

A. Landlord and Tenant are parties to a certain Indenture of Lease dated February 17, 1997, as amended by Amendment dated July 10, 1997, Second Amendment dated as of January 1998, Third Amendment dated as of March 18, 1999, Fourth Amendment dated as of April 14, 2000, Fifth Amendment dated as of March 28, 2001 and Sixth Amendment dated as of April 25, 2002 (collectively, the "Lease"). Pursuant to the Lease, Landlord leased to Tenant certain real property consisting of approximately 4.55 acres, being a portion of Parcel 2, Burgard Industrial Park, Portland, Multnomah County, Oregon, as described in the Lease (the "Premises").

B. Landlord and Tenant desire to amend the Lease in certain respects as set forth in this Sixth Extension of Lease (the "Agreement").

### Agreements:

NOW, THEREFORE, in consideration of the mutual promises of Landlord and Tenant set forth in this Agreement, the receipt and sufficiency of which are acknowledged, the parties agree as follows:

1. Month-to-Month Extension. The Term of the Lease shall continue, on a month-to-month basis, on all terms and conditions set forth in the Lease except as amended by this Agreement. Either party may terminate the Lease by giving to the other party at least 30 days prior written notice of such termination.

2. Base Rent Increase. Beginning on April 1, 2004, and continuing thereafter on the first day of each calendar month, base rent shall be at the rate of \$ 1,600.00 per acre, for a total of \$ 7,280.00 per month. Tenant shall pay such base rent without offset or deduction on the first day of each calendar month in advance.

3. Effect of Agreement. The Lease is modified only in the specific respects set forth in this Agreement. Except as expressly modified, the Lease remains unmodified and in full force and effect.



The parties have executed this Agreement to be effective as of the date first set forth above.

Landlord:

SCHNITZER INVESTMENT CORP.

By: MTM

Its: VP, CEO

Tenant:

NORTHWEST PIPE COMPANY

By: [Signature]

Its: VP - (PR)



## SIXTH AMENDMENT OF LEASE

THIS SIXTH AMENDMENT OF LEASE is made in duplicate as of this 25<sup>th</sup> day of April, 2002 by and between SCHNITZER INVESTMENT CORP. ("Landlord") and NORTHWEST PIPE COMPANY ("Tenant").

### RECITALS

A. Landlord and Tenant are parties to a certain Indenture of Lease dated February 17, 1997, as amended by Amendment dated as of July 10, 1997, Second Amendment dated as of January 1998, Third Amendment dated as of March 18, 1999, Fourth Amendment dated as of April 14, 2000 and Fifth Amendment dated as of March 28, 2001 (collectively, the "Lease"). Pursuant to the Lease, Landlord leased to Tenant certain real property consisting of approximately 4.55 acres, being a portion of Parcel 2, Burgard Industrial Park, Portland, Multnomah County, Oregon, as described in the Lease (the "Premises").

B. Paragraph 2 of the Second Amendment of Lease provides that Landlord shall annually adjust the Rent due under the Lease, as more fully provided therein (the "CPI Adjustment"). The Parties have agreed upon the CPI Adjustment and the Rent to be paid by Tenant for the period of April 1, 2002 through March 31, 2003.

C. Capitalized terms used in this Sixth Amendment of Lease (the "Sixth Amendment") shall have the meanings given to them in the Lease except as provided in this Sixth Amendment.

### AGREEMENT

In consideration of the mutual covenants and conditions contained herein and for other good and valuable consideration, Landlord and Tenant agree as follows:

1. **Rent:** Monthly Rent for the period commencing April 1, 2002 through March 31, 2003 shall be \$7,055.75, payable as provided in the Lease.
2. **Effect of Amendment:** The Lease is amended only as expressly provided in this Sixth Amendment. Except as expressly set forth in this Sixth Amendment, the Lease remains unmodified and in full force and effect.

IN WITNESS WHEREOF, Landlord and Tenant have executed this Sixth Amendment as of the date first above written.

LANDLORD:

SCHNITZER INVESTMENT CORP., an  
Oregon corporation

By: *[Signature]*

Its: President

Date: 7/25/02

TENANT:

NORTHWEST PIPE COMPANY, an  
Oregon corporation

By: *Randy Ridgley*

Its: Operations Manager

Date: 7-22-02



## FIFTH AMENDMENT OF LEASE

This Fifth Amendment of Lease is written and made in duplicate on the 28<sup>th</sup> day of March, 2001, by and between **SCHNITZER INVESTMENT CORP.** (the "Landlord") and **NORTHWEST PIPE COMPANY** (the "Tenant"). Each may be referred to from time to time as a "Party" and collectively as the "Parties."

### RECITALS

WHEREAS, under a certain indenture of Lease (the "Lease") dated February 17, 1997, as amended by Amendment of Lease dated July 10, 1997, Second Amendment of Lease dated January, 1998, Third Amendment of Lease dated March 18, 1999, and Fourth Amendment of Lease dated April 14, 2000, which are, with the Lease, incorporated by this reference, the Landlord leased certain real property to Tenant in Portland, Multnomah County, Oregon, as described in the Lease ("Premises") to Tenant; and

WHEREAS, Paragraph 2 of the Second Amendment of Lease provides for an adjustment of the rent, per a CPI increase, for the period April 1, 2001 through March 31, 2002; the Parties have agreed to the new rental amount; and it is the purpose of this Fifth Amendment of Lease to set forth all the terms and conditions of the Parties' agreement.

### AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained in this Fifth Amendment of Lease, the Parties covenant and agree as follows:

1. **Rent:** Rent for the period April 1, 2001 through March 31, 2002 shall be \$6,885.67, calculated as outlined in the Second Amendment of Lease.
2. **Other Terms:** Except as they may be modified by this Fifth Amendment of Lease, all the other terms and conditions of the Lease shall remain in full force and effect.

IN WITNESS WHEREOF, the Landlord and the Tenant have signed this Fifth Amendment of Lease as of the date first hereinabove written.

LANDLORD:

**SCHNITZER INVESTMENT CORP.**

By: 

Linda M. Wakefield  
Vice President

TENANT:

**NORTHWEST PIPE COMPANY**

By: 

Please Print Name: John Muecke

Please Print Title: VP-CFO



#### FOURTH AMENDMENT OF LEASE

This Fourth Amendment of Lease is written and made in duplicate on the 14<sup>th</sup> day of April, 2000, by and between **SCHNITZER INVESTMENT CORP.** (the "Landlord") and **NORTHWEST PIPE COMPANY** (the "Tenant"). Each may be referred to from time to time as a "Party" and collectively as the "Parties."

#### RECITALS

WHEREAS, under a certain indenture of Lease (the "Lease") dated February 17, 1997, as amended by Amendment of Lease dated July 10, 1997, Second Amendment of Lease dated January, 1998 and Third Amendment of Lease dated March 18, 1999, which are, with the Lease, incorporated by this reference, the Landlord leased certain real property to Tenant in Portland, Multnomah County, Oregon, as described in the Lease ("Premises") to Tenant; and

WHEREAS, Paragraph 2 of the Second Amendment of Lease provides for an adjustment of the rent, per a CPI increase, for the period April 1, 2000 through March 31, 2001; the Parties have agreed to the new rental amount; and it is the purpose of this Fourth Amendment of Lease to set forth all the terms and conditions of the Parties' agreement.

#### AGREEMENT

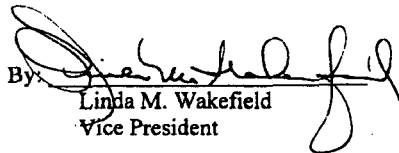
NOW, THEREFORE, in consideration of the mutual covenants and conditions contained in this Fourth Amendment of Lease, the Parties covenant and agree as follows:

1. **Rent:** Rent for the period April 1, 2000 through March 31, 2001 shall be \$6,685.12, calculated as outlined in the Second Amendment of Lease.
2. **Other Terms:** Except as they may be modified by this Fourth Amendment of Lease, all the other terms and conditions of the Lease shall remain in full force and effect.

IN WITNESS WHEREOF, the Landlord and the Tenant have signed this Fourth Amendment of Lease as of the date first hereinabove written.


LANDLORD:

**SCHNITZER INVESTMENT CORP.**

By:   
Linda M. Wakefield  
Vice President

TENANT:

**NORTHWEST PIPE COMPANY**

By:   
Please Print Name: W.R. TASHNER  
Please Print Title: CEO



### THIRD AMENDMENT OF LEASE

This Third Amendment of Lease is written and made in duplicate on the 18<sup>th</sup> day of March, 1999, by and between **SCHNITZER INVESTMENT CORP.** (the "Landlord") and **NORTHWEST PIPE COMPANY** (the "Tenant"). Each may be referred to from time to time as a "Party" and collectively as the "Parties."

#### RECITALS

WHEREAS, under a certain indenture of Lease (the "Lease") dated February 17, 1997, as amended by Amendment of Lease dated July 10, 1997 and Second Amendment of Lease dated January, 1998, which are, with the Lease, incorporated by this reference, the Landlord leased certain real property to Tenant in Portland, Multnomah County, Oregon, as described in the Lease ("Premises") to Tenant; and

WHEREAS, Paragraph 2 of the Second Amendment of Lease provides for an adjustment of the rent, per a CPI increase, for the period April 1, 1999 through March 31, 2000; the Parties have agreed to the new rental amount; and it is the purpose of this Third Amendment of Lease to set forth all the terms and conditions of the Parties' agreement.

#### AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained in this Third Amendment of Lease, the Parties covenant and agree as follows:

1. **Rent:** Rent for the period April 1, 1999 through March 31, 2000 shall be \$6,490.41, calculated as outlined in the Second Amendment of Lease.
2. **Other Terms:** Except as they may be modified by this Third Amendment of Lease, all the other terms and conditions of the Lease shall remain in full force and effect.

IN WITNESS WHEREOF, the Landlord and the Tenant have signed this Third Amendment of Lease as of the date first hereinabove written.

LANDLORD:

TENANT:

**SCHNITZER INVESTMENT CORP.**

**NORTHWEST PIPE COMPANY**

By: 

Linda M. Wakefield  
Vice President

By: 

Please Print Name: W. R. Tasmeyer

Please Print Title: CEO



222102

ORIGINAL

## SECOND AMENDMENT OF LEASE

THIS SECOND AMENDMENT OF LEASE is effective the \_\_\_\_ day of January, 1998, between SCHNITZER INVESTMENT CORP. ("Landlord") and NORTHWEST PIPE COMPANY ("Tenant"). Each may be referred to from time to time as a "Party" and collectively as the "Parties."

### RECITALS

A. Pursuant to that certain Lease Agreement dated February 17, 1997, as amended by an Amendment to Lease dated July 10, 1997 (collectively, the "Lease"), Landlord leased to Tenant, certain real property in Burgard Industrial Park, Portland, Multnomah County, Oregon, as described in the Lease ("Premises").

B. Tenant desires to relocate to a different parcel of real property, consisting of approximately 4.55 acres, being a portion of Parcel 2, Burgard Industrial Park (the "New Premises"), the location of which is outlined in red on the attached Exhibit "A".

C. Landlord is willing to lease the New Premises to Tenant, pursuant to the terms and conditions of this Second Amendment of Lease.

### AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained in this Second Amendment of Lease, the Parties agree as follows:

1. New Premises. Effective no later than April 1, 1998 ("Effective Date") the description of the Premises, as defined in the Lease, shall be changed in its entirety to be the New Premises.

2. Rent:

(a) Beginning on the Effective Date, Tenant shall pay to Landlord, as rent for the New Premises, without any prior notice, demand, offset or deduction, a monthly amount equal to the sum of \$1,400.00 per acre, for a total monthly rent of \$6,370.00.

(b) Beginning April 1, 1999, and each year thereafter, the rent for the New Premises will be adjusted upward to match any increase in the Consumer Price Index, All



Items, All Urban Consumers, for the Portland-Vancouver consolidated Metropolitan Statistical Area, as compiled by the U.S. Department of Labor, Bureau of Labor Statistics (1982-1984=100), subject, however, to a maximum increase in any one year of three percent (3%). In no event will the rent for any period be less than the preceding year.

3. Term. On the Effective Date, the term of the Lease will be for a period of five (5) years.

4. Improvements to New Premises. Landlord shall have no obligation to make any improvements to the New Premises.

5. Further Relocations. If Landlord, at anytime during the term of the Lease, requires the New Premises for either its own purposes or for the sale or lease to a third party, Landlord in its reasonable discretion may, upon ninety (90) days prior written notice to Tenant ("Landlord's Relocation Notice") require Tenant, at Tenant's expense, to relocate to a comparable parcel of property. Following such relocation the Lease shall remain in full force and effect, subject to such modifications necessary to correctly describe the new premises and rental amounts. If Landlord and Tenant are unable to agree on comparable premises within thirty (30) days after the date of Landlord's Relocation Notice, then either party may give written notice of its intent to terminate the Lease, with such termination to be effective on the ninetieth (90th) day after the date of Landlord's Relocation Notice.

6. Other Terms: Except as they may be modified by this Second Amendment of Lease, all the other terms and conditions of the Lease shall remain unmodified and in full force and effect.

N WITNESS WHEREOF, Landlord and Tenant have signed this Second Amendment of Lease as of the date first hereinabove written.

LANDLORD:

TENANT:

SCHNITZER INVESTMENT CORP.

NORTHWEST PIPE COMPANY

By [Signature]

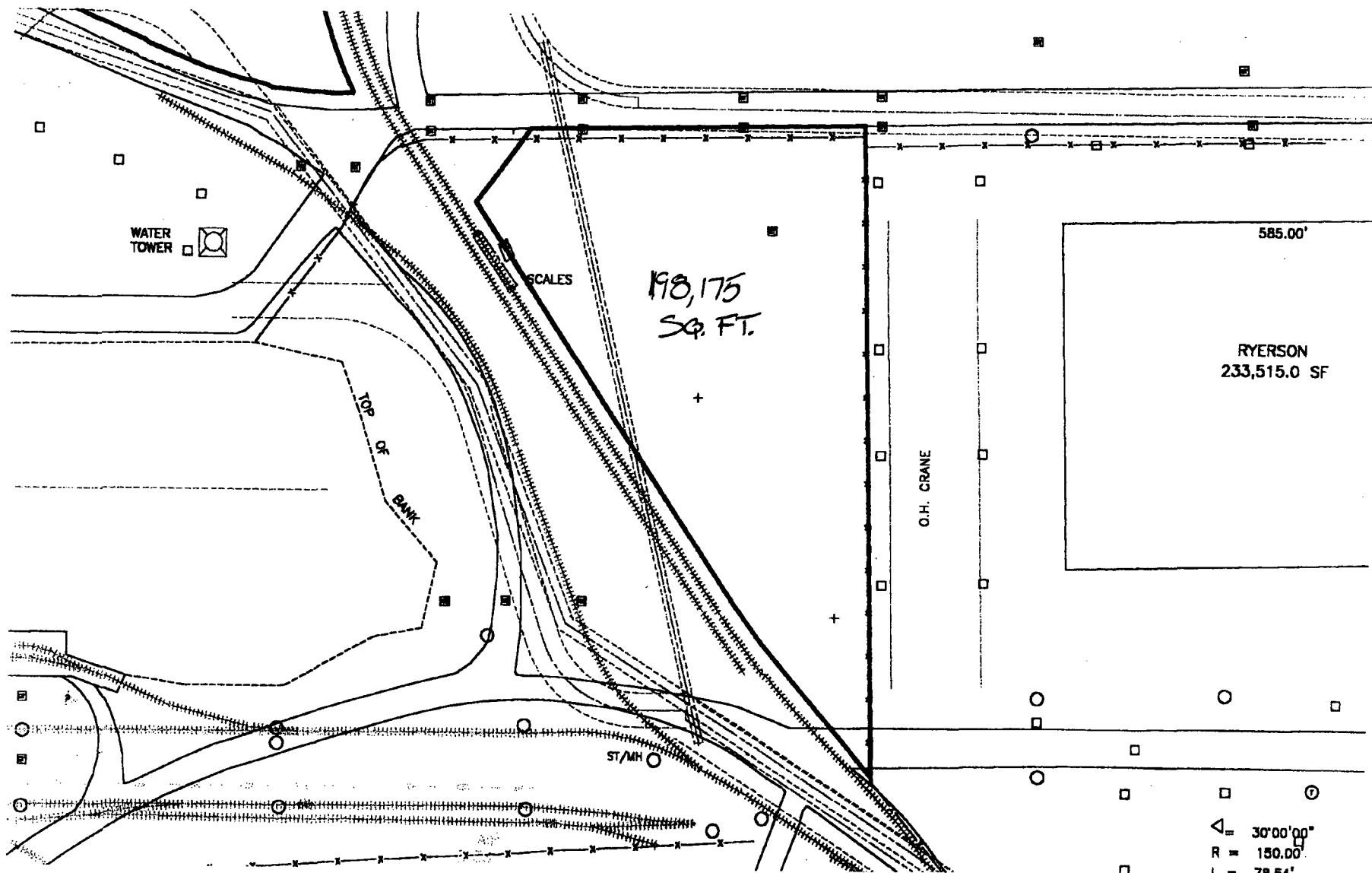
By [Signature]

Title [Signature]

Title Dir Materials



SCHN00272336





AMENDMENT OF LEASE

ORIGINAL

THIS AMENDMENT OF LEASE is written and made in duplicate on the 10th day of July, 1997, by and between SCHNITZER INVESTMENT CORP. (the "Landlord") and NORTHWEST PIPE COMPANY (the "Tenant"). Each may be referred to from time to time as a "Party" and collectively as the "Parties."

RECITALS

WHEREAS, under a certain indenture of Lease (the "Lease") dated February 17, 1997, the Landlord leased to the Tenant, certain real property in Portland, Multnomah County, Oregon, as described in the Lease; and,

WHEREAS, the Tenant now desires to lease an additional 3.101 acres on real property described as Lot 7 of Burgard Industrial Park (the "Additional Premises") adjacent to the 3.656 acres covered in the Lease. The location of the Additional Premises is outlined in red on the attached Exhibit "A"; and,

WHEREAS, the Landlord desires to lease the Additional Premises to Tenant, and it is the intent of the Parties to set forth all the terms and conditions of the Lease and this Amendment to the Lease

NOW, THEREFORE, the conditions contained in this Amendment as follows:

1. Additional Premises: to be amended to include, effective July 14, 1997, .101 acres of land.

2. Rent: In accordance with the Lease, the Tenant shall pay to the Landlord, prior notice, demand, offset or deduction, equal monthly installments of \$4,341.40 for the Additional Premises beginning July 14, 1997 and in advance promptly on the first day of every following calendar month of the term. Total rent for the Premises shall be \$9,459.80 per month.

3. Other Terms: Except as they may be modified by this Amendment of Lease, all the other terms and conditions of the Lease shall remain in full force and effect.

IN WITNESS WHEREOF, the Landlord and the Tenant have signed this Amendment of Lease as of the date first hereinabove written.

LANDLORD:

SCHNITZER INVESTMENT CORP.

By

Title

TENANT:

NORTHWEST PIPE COMPANY

By

Title

SCHN00272337

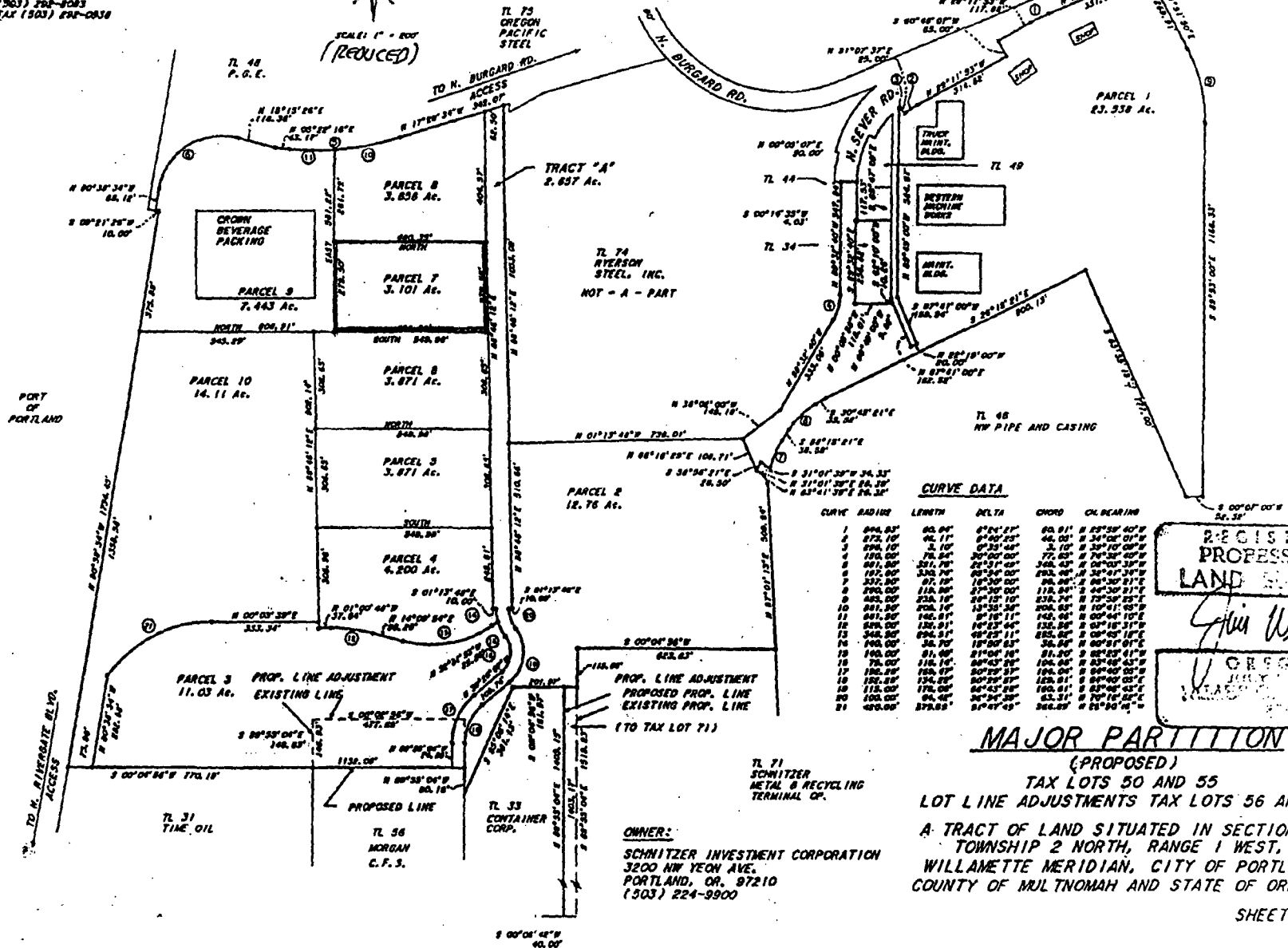


**SURVEYOR:**  
Jim Weddle and Assoc., Inc.  
1750 SW Skyline Blvd.  
Portland, Oregon 97221

(503) 224-9083  
FAX (503) 224-0838



SCALE 1" = 200'  
(REDUCED)



**CURVE DATA**

CURVE	RADIUS	LENGTH	DELTA	CHORD	CH. BEARING
1	244.82'	80.49'	6°04'21"	80.91'	N 23°29'40"W
2	272.10'	80.17'	6°04'21"	80.91'	N 34°08'01"W
3	294.10'	3.10'	0°35'48"	3.10'	N 39°10'00"W
4	100.00'	78.84'	30°00'00"	77.85'	N 74°32'40"W
5	861.80'	371.70'	21°31'00"	308.43'	N 02°00'30"W
6	197.80'	330.74'	68°34'00"	283.40'	N 34°01'30"W
7	337.80'	97.19'	16°30'00"	98.80'	N 68°30'21"E
8	200.00'	118.80'	31°30'00"	118.80'	N 44°30'31"E
9	403.80'	238.18'	30°15'10"	238.74'	N 73°30'25"E
10	261.80'	208.16'	13°35'30"	208.85'	N 10°01'00"W
11	261.80'	105.81'	6°18'11"	105.80'	N 02°04'10"E
12	529.80'	128.91'	10°23'44"	128.88'	N 02°18'31"W
13	348.80'	294.31'	08°23'11"	285.80'	N 08°05'18"E
14	100.00'	58.70'	18°00'00"	58.80'	N 00°01'01"E
15	100.00'	91.00'	31°00'10"	91.20'	N 02°02'41"W
16	78.00'	116.14'	60°43'20"	104.60'	N 03°00'43"W
17	196.20'	168.67'	20°29'31"	168.00'	N 04°00'00"W
18	128.10'	134.28'	80°29'28"	128.81'	N 04°00'00"E
19	113.00'	178.08'	60°43'20"	160.61'	N 03°00'43"E
20	100.00'	94.48'	30°34'38"	93.31'	N 70°16'28"E
21	478.00'	278.88'	9°07'45"	288.88'	N 21°30'10"E

**MAJOR PARTITION**

(PROPOSED)  
TAX LOTS 50 AND 55  
LOT LINE ADJUSTMENTS TAX LOTS 56 AND 71  
A TRACT OF LAND SITUATED IN SECTION 35,  
TOWNSHIP 2 NORTH, RANGE 1 WEST,  
WILLAMETTE MERIDIAN, CITY OF PORTLAND,  
COUNTY OF MULTNOMAH AND STATE OF OREGON

SHEET 1 of 5

15945UB

Exhibit A

SCHN00272338



AMENDMENT OF LEASE

ORIGINAL

THIS AMENDMENT OF LEASE is written and made in duplicate on the 10th day of July, 1997, by and between SCHNITZER INVESTMENT CORP. (the "Landlord") and NORTHWEST PIPE COMPANY (the "Tenant"). Each may be referred to from time to time as a "Party" and collectively as the "Parties."

RECITALS

WHEREAS, under a certain indenture of Lease (the "Lease") dated February 17, 1997, the Landlord leased to the Tenant, certain real property in Portland, Multnomah County, Oregon, as described in the Lease; and,

WHEREAS, the Tenant now desires to lease an additional 3.101 acres on real property described as Lot 7 of Burgard Industrial Park (the "Additional Premises") adjacent to the 3.656 acres covered in the Lease. The location of the Additional Premises is outlined in red on the attached Exhibit "A"; and,

WHEREAS, the Landlord is willing to lease the Additional Premises to Tenant, and it is the purpose of this Amendment of Lease to set forth all the terms and conditions of the Parties' agreement.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained in this Amendment of Lease, the Parties covenant and agree as follows:

1. Additional Premises: The Lease shall be deemed to be amended to include, effective July 14, 1997, the Additional Premises of 3.101 acres of land.

2. Rent: In addition to the rent specified in the Lease, the Tenant shall pay to the Landlord, without any prior notice, demand, offset or deduction, equal monthly installments of \$4,341.40 for the Additional Premises beginning July 14, 1997 and in advance promptly on the first day of every following calendar month of the term. Total rent for the Premises shall be \$9,459.80 per month.

3. Other Terms: Except as they may be modified by this Amendment of Lease, all the other terms and conditions of the Lease shall remain in full force and effect.

IN WITNESS WHEREOF, the Landlord and the Tenant have signed this Amendment of Lease as of the date first hereinabove written.

LANDLORD:

SCHNITZER INVESTMENT CORP.

By

Title

TENANT:

NORTHWEST PIPE COMPANY

By

Title

SCHN00272339



**SURVEYOR:**  
Jim Weddle and Assoc., Inc.  
1750 SW Skyline Blvd.  
Portland, Oregon 97211

(503) 292-9063  
FAX (503) 292-0838



SCALE: 1" = 200'  
(REDUCED)

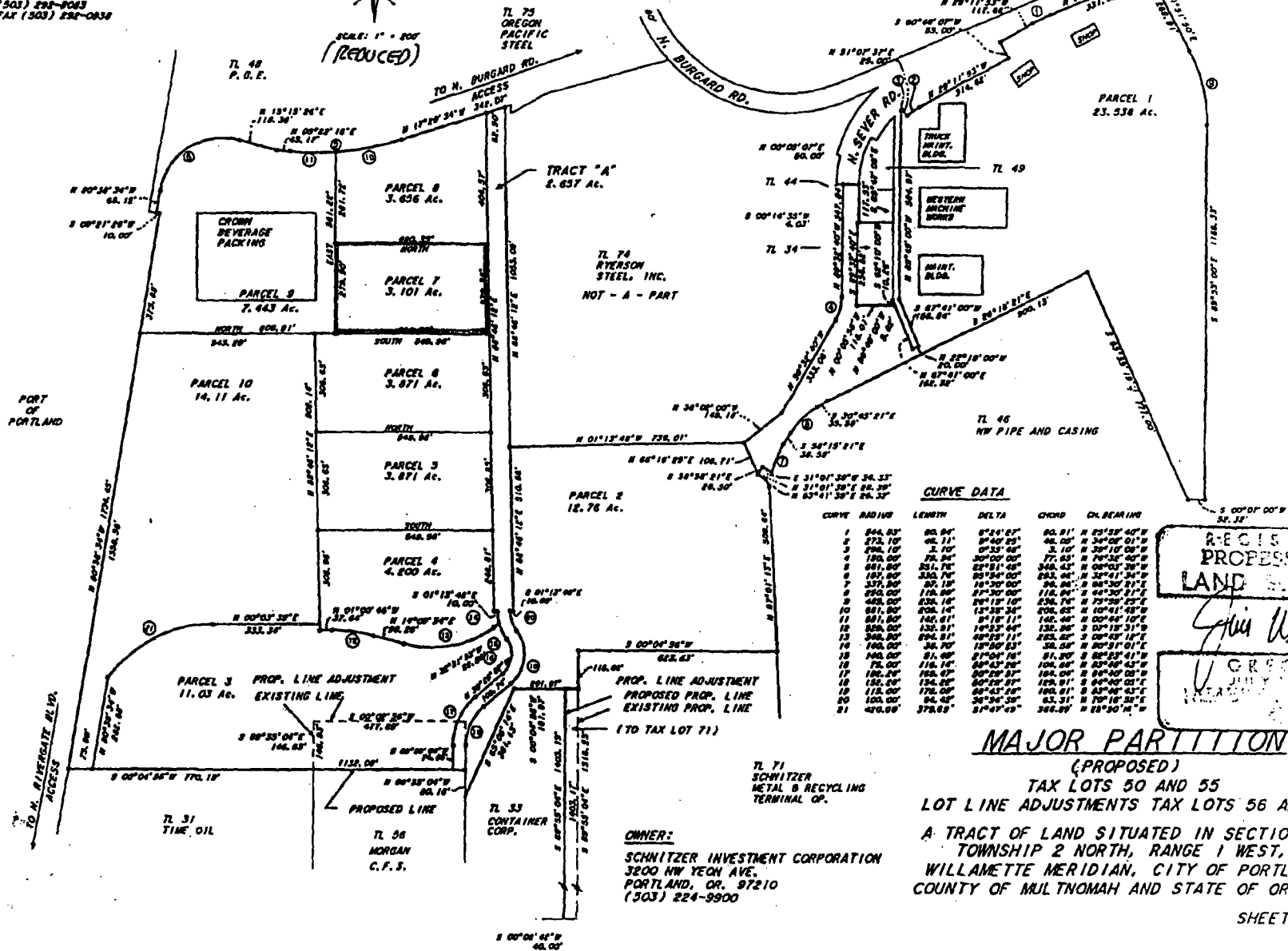


Exhibit A

REGISTERED  
PROFESSIONAL  
LAND SURVEYOR  
*Jim Weddle*  
JULY 1988  
CREATED

# MAJOR PARTITION

(PROPOSED)  
TAX LOTS 50 AND 55  
LOT LINE ADJUSTMENTS TAX LOTS 56 AND 71  
A TRACT OF LAND SITUATED IN SECTION 35,  
TOWNSHIP 2 NORTH, RANGE 1 WEST,  
WILLAMETTE MERIDIAN, CITY OF PORTLAND,  
COUNTY OF MULTNOMAH AND STATE OF OREGON

**OWNER:**  
SCHWITZER INVESTMENT CORPORATION  
3200 NW TECH AVE.  
PORTLAND, OR. 97210  
(503) 224-9900



## LEASE

ORIGINAL

THIS INDENTURE OF LEASE, made and entered into this 17th, day of February, 19 97, by and between SCHNITZER INVESTMENT CORP. hereinafter called the Lessor, and NORTHWEST PIPE COMPANY hereinafter called the Lessee,

WITNESSETH: In consideration of the covenants, agreements and stipulations herein contained on the part of the Lessee to be paid, kept and faithfully performed, the Lessor does hereby Lease, demise and let unto the said Lessee those certain premises, as is, situated in the City of PORTLAND, County of MULTNOMAH, and State of OREGON, known and described as follows:

Approximately 159,255 square feet (3.656 acres) located on real property described as Lot 8 of Burgard Industrial Park (the "Premises"). The location of the Premises is outlined in red on the attached Exhibit "A."

To Have and to Hold the said described premises unto the said Lessee for a period of time commencing with the 1st day of March, 19 97, (the "Commencement Date") and continuing on a month-to-month basis until terminated by either party with thirty(30) days written notice (the "Term") at and for a rental payable in lawful money of the United States at P.O. Box 4100-34, City of Portland, State of Oregon, at the following times and in the following amounts, to-wit:

The Lessee shall pay to the Lessor as rental, without any prior notice, demand, offset or deduction, equal monthly installments of \$5,118.40 each (the "Rent"), beginning on the first day of the Term and in advance, promptly on the first day of every following calendar month of the Term.

In consideration of the leasing of said premises and of the mutual agreements herein contained, each party hereto does hereby expressly covenant and agree to and with the other, as follows:

SCHN00272341



**LESSEE'S  
ACCEPTANCE  
OF LEASE**

(1) The Lessee accepts said letting and agrees to pay to the order of the Lessor the rentals above stated for the full term of this Lease, in advance, at the times and in the manner aforesaid.

**USE OF  
PREMISES**

(2a) The Lessee shall use said demised premises during the term of this Lease for the conduct of the following business:  
Storage of materials and related uses

and for no other purpose whatsoever without Lessor's express written consent.

(2b) The Lessee will not make any unlawful, improper or offensive use of said premises; he will not suffer any strip or waste thereof; he will not permit any objectionable noise or odor to escape or to be emitted from said premises or do anything or permit anything to be done upon or about said premises in any way tending to create a nuisance; he will not sell or permit to be sold any spirituous, vinous or malt liquors on said premises, excepting such as Lessee may be licensed by law to sell and as may be herein expressly permitted; nor will he sell or permit to be sold any controlled substance on or about said premises.

(2c) The Lessee will not allow the leased premises at any time to fall into such a state of repair or disorder as to increase the fire hazard thereon; he shall not install any power machinery on said premises except under the supervision and with written consent of the Lessor; he shall not store gasoline or other highly combustible materials on said premises at any time; he will not use said premises in such a way or for such a purpose that the fire insurance rate on the building in which said premises are located is thereby increased or that would prevent the Lessor from taking advantage of any rulings of any agency of the state in which said leased premises are situated or its successors, which would allow the Lessor to obtain reduced premium rates for long term fire insurance policies.

(2d) Lessee shall comply at Lessee's own expense with all laws and regulations of any municipal, county, state, federal or other public authority respecting the use of said leased premises.

(2e) The Lessee shall regularly occupy and use the demised premises for the conduct of Lessee's business, and shall not abandon or vacate the premises for more than ten days without written approval of Lessor.

**UTILITIES**

(3) The Lessee shall pay for all heat, light, water, power and other services or utilities used in the above demised premises during the term of this Lease.

**REPAIRS AND  
IMPROVEMENTS**

(4a) The Lessor shall not be required to make any repairs, alterations, additions or improvements to or upon said premises during the term of this Lease, except only those hereinafter specifically provided for; the Lessee hereby agrees to maintain and keep said leased premises including all interior and exterior doors, heating, ventilating and cooling systems, interior wiring, plumbing and drain pipes to sewers or septic tank, in good order and repair during the entire term of this Lease at Lessee's own cost and expense, and to replace all glass which may be broken or damaged during the term hereof in the windows and doors of said premises with glass of as good or better quality as that now in use; Lessee further agrees that he will make no alterations, additions or improvements to or upon said premises without the written consent of the Lessor first being obtained.

(4b) The Lessor agrees to maintain in good order and repair during the term of this Lease the exterior walls, roof, gutters, downspouts and foundations of the building in which the demised premises are situated and the sidewalks thereabouts.

It is understood and agreed that the Lessor reserves and at any and all times shall have the right to alter, repair or improve the building of which said demised premises are a part, or to add thereto and for that purpose at any time may erect scaffolding and all other necessary structures about and upon the demised premises and Lessor and Lessor's representatives, contractors and workmen for that purpose may enter in or about the said demised premises with such materials as Lessor may deem necessary therefor, and Lessee waives any claim to damages, including loss of business resulting therefrom.

**LESSOR'S  
RIGHT OF  
ENTRY**

(5) It shall be lawful for the Lessor, his agents and representatives, at any reasonable time to enter into or upon said demised premises for the purpose of examining into the condition thereof, or any other lawful purpose.

**RIGHT OF  
ASSIGNMENT**

(6) The Lessee will not assign, transfer, pledge, hypothecate, surrender or dispose of this Lease, or any interest herein, sublet, or permit any other person or persons whomsoever to occupy the demised premises without the written consent of the Lessor being first obtained; this Lease is personal to said Lessee; Lessee's interests, in whole or in part, cannot be sold, assigned, transferred, seized or taken by operation at law, or under or by virtue of any execution or legal process, attachment or proceedings instituted against the Lessee, or under or by virtue of any bankruptcy or insolvency proceedings had in regard to the Lessee, or in any other manner, except as above mentioned.

**LIENS**

(7) The Lessee will not permit any lien of any kind, type or description to be placed or imposed upon the building in which said leased premises are situated, or any part thereof, or the real estate on which it stands.

**ICE, SNOW,  
DEBRIS**

(8) If the premises herein leased are located at street level, then at all times Lessee shall keep the sidewalks in front of the demised premises free and clear of ice, snow, rubbish, debris and obstruction; and if the Lessee occupies the entire building, he will not permit rubbish, debris, ice or snow to accumulate on the roof of said building so as to stop up or obstruct gutters or downspouts or cause damage to said roof, and will save harmless and protect the Lessor against any injury whether to Lessor or to Lessor's property or to any other person or property caused by his failure in that regard.

**OVERLOADING  
OF FLOORS**

(9) The Lessee will not overload the floors of said premises in such a way as to cause any undue or serious stress or strain upon the building in which said demised premises are located, or any part thereof, and the Lessor shall have the right, at any time, to call upon any competent engineer or architect whom the Lessor may choose, to decide whether or not the floors of said premises, or any part thereof, are being overloaded so as to cause any undue or serious stress or strain on said building, or any part thereof, and the decision of said engineer or architect shall be final and binding upon the Lessee; and in the event that the engineer or architect so called upon shall decide that in his opinion the stress or strain is such as to endanger or injure said building, or any part thereof, then and in that event the Lessee agrees immediately to relieve said stress or strain either by reinforcing the building or by lightening the load which causes such stress or strain in a manner satisfactory to the Lessor.

SCHN00272342



**ADVERTISING  
SIGNS**

(10) The Lessee will not use the outside walls of said premises, or allow signs or devices of any kind to be attached thereto or suspended therefrom, for advertising or displaying the name or business of the Lessee or for any purpose whatsoever without the written consent of the Lessor; however, the Lessee may make use of the windows of said leased premises to display Lessee's name and business when the workmanship of such signs shall be of good quality and permanent nature; provided further that the Lessee may not suspend or place within said windows or paint thereon any banners, signs, sign-boards or other devices in violation of the intent and meaning of this section.

**LIABILITY  
INSURANCE**

(11) The Lessee further agrees at all times during the term hereof, at his own expense, to maintain, keep in effect, furnish and deliver to the Lessor liability insurance policies in form and with an insurer satisfactory to the Lessor, insuring both the Lessor and the Lessee against all liability for damages to person or property in or about said leased premises; the amount of said liability insurance shall not be less than \$1,000,000 combined single limit, any one occurrence, written on an occurrence basis. Lessee agrees to and shall indemnify and hold Lessor harmless against any and all claims and demands arising from the negligence of the Lessee, his officers, agents, invitees and/or employees, as well as those arising from Lessee's failure to comply with any covenant of this Lease on his part to be performed, and shall at his own expense defend the Lessor against any and all suits or actions arising out of such negligence, actual or alleged, and all appeals therefrom and shall satisfy and discharge any judgement which may be awarded against Lessor in any such suit or action.

**FIXTURES**

(12) All partitions, plumbing, electrical wiring, additions to or improvements upon said leased premises, whether installed by the Lessor or Lessee, shall be and become a part of the building as soon as installed and the property of the Lessor unless otherwise herein provided.

**LIGHT  
AND AIR**

(13) This Lease does not grant any rights of access to light and air over the property.

**DAMAGE BY  
CASUALTY,  
FIRE, AND  
DUTY TO  
REPAIR**

(14) In the event of the destruction of the building in which said leased premises are located by fire or other casualty, either party hereto may terminate this Lease as of the date of said fire or casualty, provided, however, that in the event of damage to said building by fire or other casualty to the extent of \_\_\_\_\_ percent or more of the sound value of said building, the Lessor may or may not elect to repair said building; written notice of Lessor's said election shall be given Lessee within fifteen days after the occurrence of said damage; if said notice is not so given, Lessor conclusively shall be deemed to have elected not to repair; in the event Lessor elects not to repair said building, then and in that event this Lease shall terminate with the date of said damage; but if the building in which said leased premises are located be but partially destroyed and the damage so occasioned shall not amount to the extent indicated above, or if greater than said extent and Lessor elects to repair, as aforesaid, then the Lessor shall repair said building with all convenient speed and shall have the right to take possession of and occupy, to the exclusion of the Lessee, all or any part of said building in order to make the necessary repairs, and the Lessee hereby agrees to vacate upon request, all or any part of said building which the Lessor may require for the purpose of making necessary repairs, and for the period of time between the day of such damage and until such repairs have been substantially completed there shall be such an abatement of rent as the nature of the injury or damage and its interference with the occupancy of said leased premises by said Lessee shall warrant; however, if the premises be but slightly injured and the damage so occasioned shall not cause any material interference with the occupation of the premises by said Lessee, then there shall be no abatement of rent and the Lessor shall repair said damage with all convenient speed.

**WAIVER OF  
SUBROGATION  
RIGHTS**

(15) Neither the Lessor nor the Lessee shall be liable to the other for loss arising out of damage to or destruction of the leased premises, or the building or improvement of which the leased premises are a part or with which they are connected, or the contents of any thereof, when such loss is caused by any of the perils which are or could be included within or insured against by a standard form of fire insurance with extended coverage, including sprinkler, leakage insurance, if any. All such claims for any and all loss, however caused, hereby are waived. Such absence of liability shall exist whether or not the damage or destruction is caused by the negligence of either Lessor or Lessee or by any of their respective agents, servants or employees. It is the intention and agreement of the Lessor and the Lessee that the rentals reserved by this Lease have been fixed in contemplation that each party shall fully provide his own insurance protection at his own expense, and that each party shall look to his respective insurance carriers for reimbursement of any such loss, and further, that the insurance carriers involved shall not be entitled to subrogation under any circumstances against any party to this Lease. Neither the Lessor nor the Lessee shall have any interest or claim in the other's insurance policy or policies, or the proceeds thereof, unless specifically covered therein as a joint assured.

**EMINENT  
DOMAIN**

(16) In case of the condemnation or purchase of all or any substantial part of the said demised premises by any public or private corporation with the power of condemnation this Lease may be terminated, effective on the date possession is taken, by either party hereto on written notice to the other and in that case the Lessee shall not be liable for any rent after the termination date. Lessee shall not be entitled to and hereby expressly waives any right to any part of the condemnation award or purchase price.

**FOR SALE  
AND  
FOR RENT  
SIGNS**

(17) During the period of N/A days prior to the date above fixed for the termination of said Lease, the Lessor herein may post on said premises or in the windows thereof signs of moderate size notifying the public that the premises are "for sale" or "for lease".

**DELIVERING UP  
PREMISES ON  
TERMINATION**

(18) At the expiration of said term or upon any sooner termination thereof, the Lessee will quit and deliver up said leased premises and all fixture erections or additions to or upon the same, broom-clean, to the Lessor or those having Lessor's estate in the premises, peaceably, and quietly, and in as good order and condition, reasonable use and wear thereof, damage by fire, unavoidable casualty and the elements alone excepted, as the same are now in or hereafter may be put in by the Lessor.

**ADDITIONAL  
COVENANTS  
OR  
EXCEPTIONS**

(19) Hazardous Materials. During the term of this Lease, Lessee shall not cause or permit any Hazardous Materials to be placed, held, located or disposed of on, in or under the Premises or to otherwise affect the Premises in any manner that violates federal, state or local laws, ordinances, rules, regulations or policies now in effect or hereafter adopted governing the use, storage, treatment, transportation, manufacture, refinement, handling, production or disposal of Hazardous Materials (collectively, the "Environmental Laws"). For purposes of this section, "Hazardous Materials" shall mean any flammable substances, explosives, radioactive materials, hazardous materials, hazardous wastes, toxic substances, pollutants, pollution or related materials specified as such in, or regulated under, any of the Environmental Laws. Lessor shall have neither the ability nor the duty to direct Lessee's activities with respect to Hazardous Materials or its compliance with Environmental Laws. At the expiration or earlier termination of this Lease, Lessee shall cause any Hazardous Materials permitted or caused by the Lessee, to be placed, held, located or disposed of on, in, under or affecting the Premises in any manner that violate the Environmental Laws to be cleaned up and removed from the Premises at Lessee's expense in such manner as to comply with the Environmental Laws. Lessee shall indemnify, defend and hold Lessor and the present and future owners of the property harmless from and against any and all losses, liabilities, claims and expenses (including reasonable attorney fees through appeal and fees of environmental engineers) arising out of or in any way relating to any default by Lessee pursuant to this



section, and the agreements by Lessee in this section shall survive the expiration or earlier termination of this Lease. Lessees shall immediately advise Lessor in writing of any and all enforcement, cleanup, remedial, removal or other governmental or regulatory actions instituted, completed or threatened pursuant to any Environmental Laws affecting the Premises.

**ARBITRATION** (20) Any dispute arising between the Parties during the Term of the Lease will be resolved by a single arbitrator mutually agreeable to the Parties. The arbitration will take place in Portland, Oregon and be concluded within six (6) months of the date demand for arbitration is served by one party or the other. In the event the Parties are unable to agree on an arbitrator within thirty (30) days after a demand for arbitration is made by one party they will apply to the circuit court at Multnomah County and ask the court to select an arbitrator for them.

**COSTS OF ARBITRATION/LEGAL PROCEEDINGS** (21) If any arbitration or legal proceedings are brought by either party to this Lease to enforce its rights under it, the losing party shall pay all costs and expenses, including attorney's fees, incurred by the prevailing party in such arbitration or legal proceedings, and all appeals therefrom.

**ATTACHMENT BANKRUPT DEFAULT** PROVIDED, ALWAYS, and these presents are upon these conditions, that (1) if the Lessee shall be in arrears in the payment of said rent for a period of ten days after the same becomes due, or (2) if the Lessee shall fail or neglect to do, keep, perform or observe any of the covenants and agreements contained herein on Lessee's part to be done, kept, performed and observed and such default shall continue for ten days or more after written notice of such failure or neglect shall be given to Lessee, or (3) if the Lessee shall be declared bankrupt or insolvent according to law, or (4) if any assignment of Lessee's property shall be made for the benefit of creditors, or (5) if on the expiration of this Lease Lessee fails to surrender possession of said leased premises, then and in either or any of said cases or events, the Lessor or those having Lessor's estate in the premises, may terminate this Lease and, lawfully, at his or their option immediately or at any time thereafter, without demand or notice, may enter into and upon said demised premises and every part thereof and repossess the same as of Lessor's former estate, and expel said Lessee and those claiming by, through and under Lessee and remove Lessee's effects at Lessee's expense, forcibly if necessary and store the same, all without being deemed guilty of trespass and without prejudice to any remedy which otherwise might be used for arrears of rent or preceding breach of covenant.

Neither the termination of this Lease by forfeiture nor the taking or recovery of possession of the premises shall deprive Lessor of any other action, right or remedy against Lessee for possession, rent or damages, nor shall any omission by Lessor to enforce any forfeiture, right or remedy to which Lessor may be entitled by deemed a waiver by Lessor of the right to enforce the performance of all terms and conditions of this Lease by Lessee.

In the event of any re-entry by Lessor, Lessor may Lease or relet the premises in whole or in part to any tenant or tenants who may be satisfactory to Lessor, for any duration, and for the best rent, terms and conditions as Lessor may reasonably obtain. Lessor shall apply the rent received from any new tenant first to the cost of retaking and reletting the premises, including remodeling required to obtain any new tenant, and then to any arrears of rent and future rent payable under this Lease and any other damages to which Lessor may be entitled hereunder.

Any property which Lessee leaves on the premises after abandonment or expiration of the Lease, or for more than ten days after any termination of the Lease by Landlord, shall be deemed to have been abandoned, and Lessor may remove and sell said property at public or private sale as Lessor sees fit, without being liable for any prosecution therefor or for damages by reason thereof, and the net proceeds of said sale shall be applied toward the expenses of Landlord and rent as aforesaid, and the balance of such amounts, if any, shall be held for and paid to the Lessee.

**HOLDING OVER** In the event the Lessee for any reason shall hold over after the expiration of this Lease, such holding over shall not be deemed to operate as a renewal or extension of this Lease, but shall only create a tenancy from month to month which may be terminated at will at any time by the Lessor.

**ATTORNEY FEES AND COURT COSTS** In case suit or action is instituted to enforce compliance with any of the terms, covenants or conditions of this Lease, or to collect the rental which may become due hereunder, or any portion thereof, the losing party agrees to pay such sum as the trial court may adjudge reasonable as attorney's fees to be allowed the prevailing party in such suit or action and in the event any appeal is taken from any judgement or decree in such suit or action, the losing party agrees to pay such further sum as the appellate court shall adjudge reasonable as prevailing party's attorney's fees on such appeal. The Lessee agrees to pay and discharge all Lessor's costs and expenses, including Lessor's reasonable attorney's fees that shall arise from enforcing any provision or covenants of this Lease even though no suit or action is instituted.

**WAIVER** Any waiver by the Lessor of any breach of any covenant herein contained to be kept and performed by the Lessee shall not be deemed or considered as a continuing waiver, and shall not operate to bar or prevent the Lessor from declaring a forfeiture for any succeeding breach, either of the same condition or covenant or otherwise.


**NOTICES** Any notice required by the terms of this Lease to be given by one party hereto to the other or desired so to be given, shall be sufficient if in writing contained in a sealed envelope, deposited in the U.S. Registered Mails with postage fully prepaid, and if intended for the Lessor herein then if addressed to said Lessor at P.O. Box 10047, Portland, Oregon 97296-0047 and if intended for the Lessee, then if addressed to the Lessee at P.O. Box 83149, Portland, Oregon 97283-0149. Any such notice shall be deemed conclusively to have been delivered to the addressee thereof forty-eight hours after the deposit thereof in said U.S. Registered Mails.



**HEADS AND  
ASSIGNS**

All rights, remedies and liabilities herein given to or imposed upon either of the parties hereto shall extend to, inure to the benefit of and bind, as the circumstances may require, the heirs, executors, administrators, successors and, so far as this Lease is assignable by the term hereof, to the assigns of such parties.

In construing this Lease, it is understood that the Lessor or the Lessee may be more than one person; that if the context so requires, the singular pronoun shall be taken to mean and include the plural, the masculine, the feminine and the neuter, and that generally all grammatical changes shall be made, assumed and implied to make the provisions hereof apply equally to corporations and to individuals.

This lease includes the additional provision which appears below as Rider A. 

IN WITNESS WHEREOF, the respective parties have executed this instrument in duplicate on this, the day and year first hereinabove written, any corporation signature being by authority of its Board of Directors.

SCHNITZER INVESTMENT CORP., LESSOR

BY: 


TITLE: Vice President

NORTHWEST PIPE COMPANY, LESSEE

BY: 

TITLE: VP-CPE

**Rider A**

Lessor shall indemnify and hold harmless Lessee its officers directors, employees and agents from and against any and all costs of environmental remediation, including, without limitation, attorneys' fees and expenses, arising out of the presence of any Hazardous Materials on, in, under or from the Leased Premises as of the effective date of this Lease. 

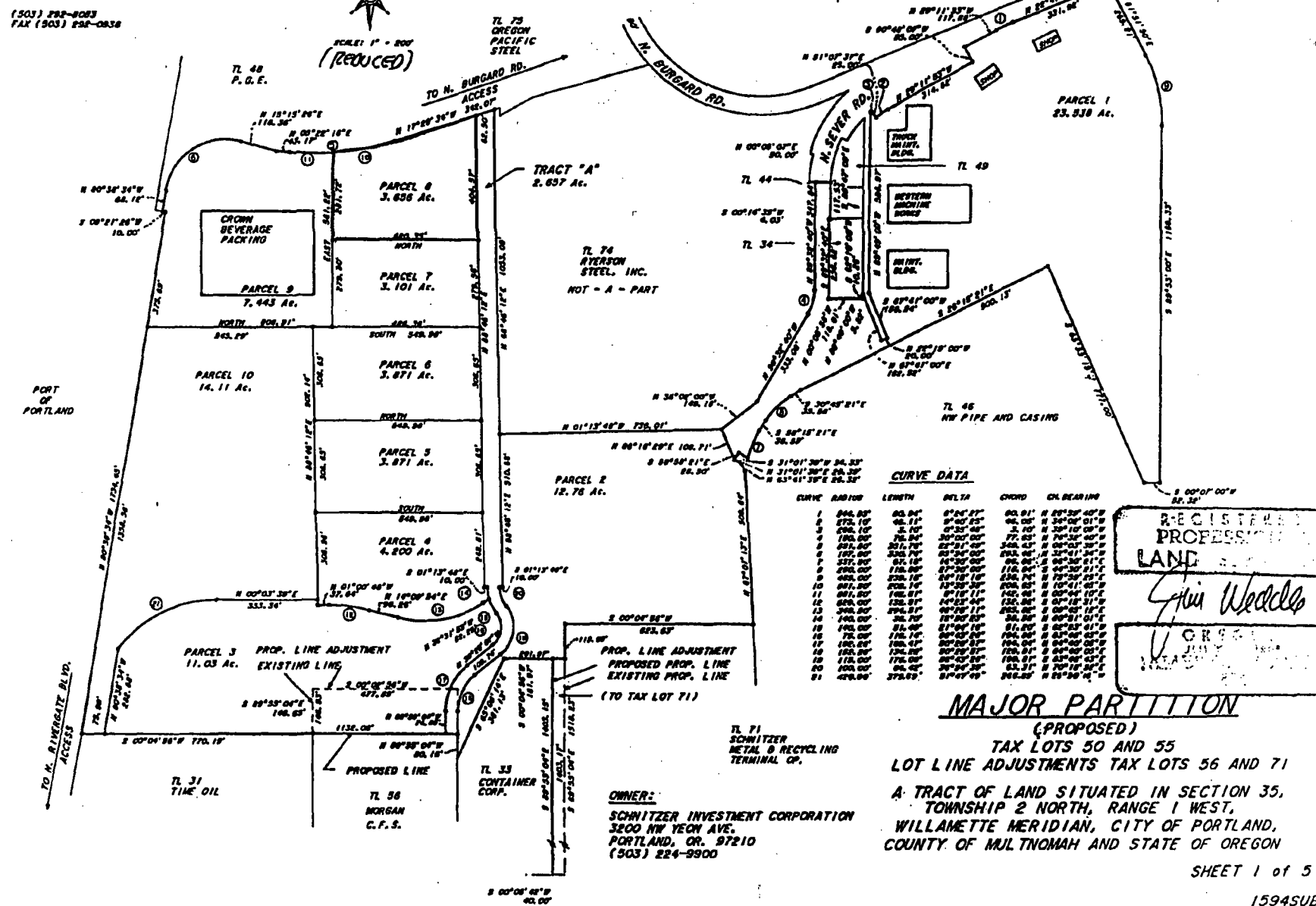
SCHN00272345



**SURVEYOR**  
 Jim Weddle and Assoc., Inc.  
 1750 SW Skyline Blvd.  
 Portland, Oregon 97221  
 (503) 292-8083  
 FAX (503) 292-0838



SCALE: 1" = 200'  
 (REDUCED)



**CURVE DATA**

CURVE	RADIUS	LENGTH	DELTA	CHORD	CH. BEARING
1	846.85	85.94	6°24'27"	80.91	N 89°39'40"E
2	275.10	46.71	8°00'25"	46.00	N 34°00'01"E
3	206.10	3.10	0°35'40"	3.10	N 34°10'00"E
4	180.84	76.94	30°00'00"	77.83	N 74°30'00"E
5	281.20	351.79	22°51'00"	368.43	N 68°03'30"E
6	155.00	310.70	62°00'00"	283.96	N 32°41'34"E
7	337.20	67.18	46°30'00"	60.96	N 64°30'01"E
8	605.00	276.18	8°18'18"	116.94	N 84°30'01"E
9	280.00	270.14	13°20'30"	208.83	N 10°41'00"E
10	881.00	176.87	9°18'11"	145.98	N 80°44'10"E
11	881.00	176.87	9°18'11"	145.98	N 01°18'31"E
12	658.00	123.51	14°18'40"	102.86	N 01°18'31"E
13	300.00	294.51	10°20'17"	263.86	N 80°01'18"E
14	140.00	26.70	10°20'00"	26.30	N 80°01'01"E
15	140.00	26.70	8°00'00"	26.30	N 80°00'00"E
16	74.00	176.14	50°00'00"	194.00	N 03°00'00"E
17	180.00	180.00	90°00'00"	180.00	N 03°00'00"E
18	180.00	180.00	90°00'00"	180.00	N 03°00'00"E
19	176.00	176.00	90°00'00"	176.00	N 03°00'00"E
20	100.00	66.00	30°00'00"	63.31	N 70°18'34"E
21	420.00	373.69	8°00'00"	368.20	N 80°00'00"E

REGISTERED  
 PROFESSIONAL  
 LAND SURVEYOR  
*Jim Weddle*  
 JUNE 1984  
 REASON: 1984

**MAJOR PARTITION**

(PROPOSED)  
 TAX LOTS 50 AND 55  
 LOT LINE ADJUSTMENTS TAX LOTS 56 AND 71  
 A TRACT OF LAND SITUATED IN SECTION 35,  
 TOWNSHIP 2 NORTH, RANGE 1 WEST,  
 WILLAMETTE MERIDIAN, CITY OF PORTLAND,  
 COUNTY OF MULTNOMAH AND STATE OF OREGON

**OWNER:**  
 SCHWITZER INVESTMENT CORPORATION  
 3200 NW YEON AVE.  
 PORTLAND, OR. 97210  
 (503) 224-9900

SCHN00272346





**NORTHWEST PIPE COMPANY**

PGC ~~X~~ LMW ✓

RG —

cc: Gap to  
terminate file.

OCT. 25, 1996

TO: SCHNITZER STEEL  
P.O. BOX 10047  
PORTLAND, ORE. 97210  
ATTN: LINDA WAKEFIELD

FROM: NORTHWEST PIPE COMPANY  
12005 N. BURGARD  
PORTLAND, ORE. 97203  
(503)285-1400

RE: RENTAL AGREEMENT

PLEASE CONSIDER THIS A 30 DAY WRITTEN NOTICE TO TERMINATE THE  
RENTAL AGREEMENT ON THE PROPERTY DESCRIBED BELOW.

PARCEL 8 - 3.656 ACRES - SEE EXHIBIT "A"

AS OF MIDNIGHT NOVEMBER 30, 1996 WE WILL NO LONGER BE RENTING  
THIS LAND. THE SAND RIBBONS THAT WERE PLACED TO STORE PIPE  
WILL BE SMOOTHED OUT DURING THE MONTH OF NOVEMBER.

THANK YOU FOR THE OPPORTUNITY TO UTILIZE THIS PROPERTY.

SINCERELY,

*Peggy Eten*

PEGGY ETEN  
MATERIALS MANAGER



SCHN00272348



ORIGINAL

## LEASE

THIS INDENTURE OF LEASE, made and entered into this 22nd day of January, 19 96, by and between SCHNITZER INVESTMENT CORP.

hereinafter called the Lessor, and NORTHWEST PIPE AND CASING COMPANY

, hereinafter called the Lessee,

WITNESSETH: In consideration of the covenants, agreements and stipulations herein contained on the part of the Lessee to be paid, kept and faithfully performed, the Lessor does hereby Lease, demise and let unto the said Lessee those certain premises, as is, situated in the City of PORTLAND, County of MULTNOMAH, and State of OREGON, known and described as follows:

Approximately 159,255 square feet of land (3.656 acres) located on real property described as Lot 8 of Burgard Industrial Park (the "Premises"). The location of the Premises is outlined in red on the attached Exhibit "A".

Looks like this  
version was  
replaced by  
Feb. 17, 1997

To Have and to Hold the said described premises unto the said Lessee for a period of time commencing with the 1st day of February, 19 96, (the "Commencement Date") and continuing on a month-to-month basis until terminated by either party with thirty (30) days written notice (the "Term"), at and for a rental payable in lawful money of the United States at P.O. Box 10047, City of Portland, State of Oregon, at the following times and in the following amounts, to-wit:

The Tenant shall pay to the Landlord as rental, without any prior notice, demand, offset or deduction, equal monthly installments of \$3,838.80 each (the "Rent"), beginning on the first day of the Term and in advance, promptly on the first day of every following calendar month of the Term.

The rent went from  
\$3838.80 to \$5118.40,  
but the term was still  
MTM,

In consideration of the leasing of said premises and of the  
hereby expressly covenant and agree to and with the other, as follo

eto does



**LESSEE'S  
ACCEPTANCE  
OF LEASE**

(1) The Lessee accepts said building and agrees to pay to the order of the Lessor the rentals here stated for the full term of this Lease, in advance, at the times and in the manner aforesaid.

**USE OF  
PREMISES**

(2a) The Lessee shall use said demised premises during the term of this Lease for the conduct of the following business:  
storage of materials and related uses.

and for no other purpose whatsoever without Lessor's express written consent.

(2b) The Lessee will not make any unlawful, improper or offensive use of said premises; he will not suffer any strip or waste thereof; he will not permit any objectionable noise or odor to escape or to be emitted from said premises or do anything or permit anything to be done upon or about said premises in any way tending to create a nuisance; he will not sell or permit to be sold any spirituous, vinous or malt liquors on said premises, excepting such as Lessee may be licensed by law to sell and as may be herein expressly permitted; nor will he sell or permit to be sold any controlled substance on or about said premises.

(2c) The Lessee will not allow the leased premises at any time to fall into such a state of repair or disorder as to increase the fire hazard thereon; he shall not install any power machinery on said premises except under the supervision and with written consent of the Lessor; he shall not store gasoline or other highly combustible materials on said premises at any time; he will not use said premises in such a way or for such a purpose that the fire insurance rate on the building in which said premises are located is thereby increased or that would prevent the Lessor from taking advantage of any ruling of any agency of the state in which said leased premises are situated or its successors, which would allow the Lessor to obtain reduced premium rates for long term fire insurance policies. Rob

(2d) Lessee shall comply at Lessee's own expense with all laws and regulations of any municipal, county, state, federal or other public authority respecting the use of said leased premises.

(2e) The Lessee shall regularly occupy and use the demised premises for the conduct of Lessee's business, and shall not abandon or vacate the premises for more than ten days without written approval of Lessor.

**UTILITIES**

(3) The Lessee shall pay for all heat, light, water, power and other services or utilities, if any, used in the above demised premises during the term of this Lease.

**REPAIRS AND  
IMPROVEMENTS**

(4a) The Lessor shall not be required to make any repairs, alterations, additions or improvements to or upon said premises during the term of this Lease, except only those hereinafter specifically provided for; the Lessee hereby agrees to maintain and keep said leased premises including all interior and exterior doors, heating, ventilating and cooling systems, interior wiring, plumbing and drain pipes to sewers or septic tank, in good order and repair during the entire term of this Lease at Lessee's own cost and expense, and to replace all glass which may be broken or damaged during the term hereof in the windows and doors of said premises with glass of as good or better quality as that now in use; Lessee further agrees that he will make no alterations, additions or improvements to or upon said premises without the written consent of the Lessor first being obtained. Rob

(4b) The Lessor agrees to maintain in good order and repair during the term of this Lease the exterior walls, roof, gutters, downspouts and foundations of the building in which the demised premises are situated and the sidewalks thereabouts.

It is understood and agreed that the Lessor reserves and at any and all times shall have the right to alter, repair or improve the building of which said demised premises are a part, or to add thereto and for that purpose at any time may erect scaffolding and all other necessary structures about and upon the demised premises and Lessor and Lessor's representatives, contractors and workmen for that purpose may enter in or about the said demised premises with such materials as Lessor may deem necessary therefor, and Lessee waives any claim to damages, including loss of business resulting therefrom. Rob

**LESSOR'S  
RIGHT OF  
ENTRY**

(5) It shall be lawful for the Lessor, his agents and representatives, at any reasonable time to enter into or upon said demised premises for the purpose of examining into the condition thereof, or any other lawful purpose.

**RIGHT OF  
ASSIGNMENT**

(6) The Lessee will not assign, transfer, pledge, hypothecate, surrender or dispose of this Lease, or any interest herein, sublet, or permit any other person or persons whomsoever to occupy the demised premises without the written consent of the Lessor being first obtained; this Lease is personal to said Lessee; Lessee's interests, in whole or in part, cannot be sold, assigned, transferred, seized or taken by operation at law, or under or by virtue of any execution or legal process, attachment or proceedings instituted against the Lessee, or under or by virtue of any bankruptcy or insolvency proceedings had in regard to the Lessee, or in any other manner, except as above mentioned.

**LIENS**

(7) The Lessee will not permit any lien of any kind, type or description to be placed or imposed upon the building in which said leased premises are situated, or any part thereof, or the real estate on which it stands.

**ICE, SNOW,  
DEBRIS**

(8) If the premises herein leased are located at street level, then at all times Lessee shall keep the sidewalks in front of the demised premises free and clear of ice, snow, rubbish, debris and obstruction; and if the Lessee occupies the entire building, he will not permit rubbish, debris, ice or snow to accumulate on the roof of said building so as to stop up or obstruct gutters or downspouts or cause damage to said roof, and will save harmless and protect the Lessor against any injury whether to Lessor or to Lessor's property or to any other person or property caused by his failure in that regard.

**OVERLOADING  
OF FLOORS**

(9) The Lessee will not overload the floors of said premises in such a way as to cause any undue or serious stress or strain upon the building in which said demised premises are located, or any part thereof, and the Lessor shall have the right, at any time, to call upon any competent engineer or architect whom the Lessor may choose, to decide whether or not the floors of said premises, or any part thereof, are being overloaded so as to cause any undue or serious stress or strain on said building, or any part thereof, and the decision of said engineer or architect shall be final and binding upon the Lessee; and in the event that the engineer or architect so called upon shall decide that in his opinion the stress or strain is such as to endanger or injure said building, or any part thereof, then and in that event the Lessee agrees immediately to relieve said stress or strain either by reinforcing the building or by lightening the load which causes such stress or strain in a manner satisfactory to the Lessor. Rob



**ADVERTISING SIGNS** (10) The Lessee will not use the outside walls of said premises, or allow signs or devices of any kind to be attached thereto or suspended therefrom, for advertising or displaying the name or business of the Lessee or for any purpose whatsoever without the written consent of the Lessor; however, the Lessee may make use of the windows of said leased premises to display Lessee's name and business when the workmanship of such signs shall be of good quality and permanent nature; provided further that the Lessee may not suspend or place within said windows or paint thereon any banners, signs, sign-boards or other devices in violation of the intent and meaning of this section.

**LIABILITY INSURANCE** (11) The Lessee further agrees at all times during the term hereof, at his own expense, to maintain, keep in effect, furnish and deliver to the Lessor liability insurance policies in form and with an insurer satisfactory to the Lessor, insuring both the Lessor and the Lessee against all liability for damages to person or property in or about said leased premises; the amount of said liability insurance shall not be less than \$1,000,000 combined single limit, any one occurrence, written on an occurrence basis. Lessee agrees to and shall indemnify and hold Lessor harmless against any and all claims and demands arising from the negligence of the Lessee, his officers, agents, invitees and/or employees, as well as those arising from Lessee's failure to comply with any covenant of this Lease on his part to be performed, and shall at his own expense defend the Lessor against any and all suits or actions arising out of such negligence, actual or alleged, and all appeals therefrom and shall satisfy and discharge any judgement which may be awarded against Lessor in any such suit or action.

**FIXTURES** (12) All partitions, plumbing, electrical wiring, additions to or improvements upon said leased premises, whether installed by the Lessor or Lessee, shall be and become a part of the building as soon as installed and the property of the Lessor unless otherwise herein provided. *Not*

**LIGHT AND AIR** (13) This Lease does not grant any rights of access to light and air over the property.

**DAMAGE BY CASUALTY, FIRE, AND DUTY TO REPAIR** (14) In the event of the destruction of the building in which said leased premises are located by fire or other casualty, either party hereto may terminate this Lease as of the date of said fire or casualty, provided, however, that in the event of damage to said building by fire or other casualty to the extent of \_\_\_\_\_ percent or more of the sound value of said building, the Lessor may or may not elect to repair said building; written notice of Lessor's said election shall be given Lessee within fifteen days after the occurrence of said damage; if said notice is not so given, Lessor conclusively shall be deemed to have elected not to repair in the event Lessor elects not to repair said building, then and in that event this Lease shall terminate with the date of said damage; but if the building in which said leased premises are located be but partially destroyed and the damage so occasioned shall not amount to the extent indicated above, or if greater than said extent and Lessor elects to repair, as aforesaid, then the Lessor shall repair said building with all convenient speed and shall have the right to take possession of and occupy, to the exclusion of the Lessee, all or any part of said building in order to make the necessary repairs, and the Lessee hereby agrees to vacate upon request, all or any part of said building which the Lessor may require for the purpose of making necessary repairs, and for the period of time between the day of such damage and until such repairs have been substantially completed there shall be such an abatement of rent as the nature of the injury or damage and its interference with the occupancy of said leased premises by said Lessee shall warrant; however, if the premises be but slightly injured and the damage so occasioned shall not cause any material interference with the occupation of the premises by said Lessee, then there shall be no abatement of rent and the Lessor shall repair said damage with all convenient speed. *Not*

**WAIVER OF SUBROGATION RIGHTS** (15) Neither the Lessor nor the Lessee shall be liable to the other for loss arising out of damage to or destruction of the leased premises, or the building or improvement of which the leased premises are a part or with which they are connected, or the contents of any thereof, when such loss is caused by any of the perils which are or could be included within or insured against by a standard form of fire insurance with extended coverage, including sprinkler, leakage insurance, if any. All such claims for any and all loss, however caused, hereby are waived. Such absence of liability shall exist whether or not the damage or destruction is caused by the negligence of either Lessor or Lessee or by any of their respective agents, servants or employees. It is the intention and agreement of the Lessor and the Lessee that the rentals reserved by this Lease have been fixed in contemplation that each party shall fully provide his own insurance protection at his own expense, and that each party shall look to his respective insurance carriers for reimbursement of any such loss, and further, that the insurance carriers involved shall not be entitled to subrogation under any circumstances against any party to this Lease. Neither the Lessor nor the Lessee shall have any interest or claim in the other's insurance policy or policies, or the proceeds thereof, unless specifically covered therein as a joint assured.

**EMINENT DOMAIN** (16) In case of the condemnation or purchase of all or any substantial part of the said demised premises by any public or private corporation with the power of condemnation this Lease may be terminated, effective on the date possession is taken, by either party hereto on written notice to the other and in that case the Lessee shall not be liable for any rent after the termination date. Lessee shall not be entitled to and hereby expressly waives any right to any part of the condemnation award or purchase price.

**FOR SALE AND FOR RENT SIGNS** (17) During the period of N/A days prior to the date above fixed for the termination of said Lease, the Lessor herein may post on said premises or in the windows thereof signs of moderate size notifying the public that the premises are "for sale" or "for lease".

**DELIVERING UP PREMISES ON TERMINATION** (18) At the expiration of said term or upon any sooner termination thereof, the Lessee will quit and deliver up said leased premises and all future erections or additions to or upon the same, broom-clean, to the Lessor or those having Lessor's estate in the premises, peaceably, quietly, and in as good order and condition, reasonable use and wear thereof, damage by fire, unavoidable casualty and the elements alone excepted, as same are now in or hereafter may be put in by the Lessor.

**ADDITIONAL COVENANTS OR EXCEPTIONS** (19) Hazardous Materials. During the Term of this Lease, Lessee shall not cause or permit any Hazardous Materials to be placed, held, located or disposed of on, in or under the Premises or to otherwise affect the Premises in any manner that violates federal, state or local laws, ordinances, rules, regulations or policies now in effect or hereafter adopted governing the use, storage, treatment, transportation, manufacture, refinement, handling, production or disposal of Hazardous Materials (collectively, the "Environmental Laws"). For purposes of this section, "Hazardous Materials" shall mean any flammable substances, explosives, radioactive materials, hazardous materials, hazardous wastes, toxic substances, pollutants, pollution or related materials specified as such in, or regulated under, any of the Environmental Laws. Lessor shall have neither the ability nor the duty to direct Lessee's activities with respect to Hazardous Materials or its compliance with Environmental Laws. At the expiration or earlier termination of this Lease, Lessee shall cause any Hazardous Materials permitted or caused by the Lessee to be placed, held, located or disposed of on, in, under or affecting the Premises in any manner that violate the Environmental Laws to be cleaned up and removed from the Premises at Lessee's expense in such manner as to comply with the Environmental Laws. Lessee shall indemnify, defend and hold Lessor and the present and future property owners of the property harmless from and against any and all losses, liabilities, claims and expenses (including reasonable attorney fees through appeal and fees of environmental engineers) arising out of or in any way relating to any default by Lessee pursuant to this section, and the agreements by Lessee in this section shall survive the expiration or earlier termination of this Lease. Lessee



shall immediately advise Lessor in writing of any enforcement, cleanup, remedial, removal or other governmental or regulatory actions instituted, completed or threatened pursuant to any Environmental Law affecting the Premises.

(20) **Arbitration.** Any dispute arising between the Parties during the term of this Lease will be resolved by a single arbitrator mutually agreeable to the Parties. The arbitration will take place in Portland, Oregon and be concluded within six (6) months of the date demand for arbitration is served by one party or the other. In the event the Parties are unable to agree on an arbitrator within thirty (30) days after a demand for arbitration is made by one party, they will apply to the circuit court at Multnomah County and ask the court to select an arbitrator for them.

(21) **Costs of Arbitration/Legal Proceedings.** If any arbitration or legal proceedings are brought by either Party to this Lease to enforce its rights under it, the losing party shall pay all costs and expenses, including attorneys' fees, incurred by the prevailing party in such arbitration or legal proceedings, and all appeals therefrom.

**ATTACHMENT BANKRUPT DEFAULT** PROVIDED, ALWAYS, and these presents are upon these conditions, that (1) if the Lessee shall be in arrears in the payment of said rent for a period of ten days after the same becomes due, or (2) if the Lessee shall fail or neglect to do, keep, perform or observe any of the covenants and agreements contained herein on Lessee's part to be done, kept, performed and observed and such default shall continue for ten days or more after written notice of such failure or neglect shall be given to Lessee, or (3) if the Lessee shall be declared bankrupt or insolvent according to law, or (4) if any assignment of Lessee's property shall be made for the benefit of creditors, or (5) if on the expiration of this Lease Lessee fails to surrender possession of said leased premises, then and in either or any of said cases or events, the Lessor or those having Lessor's estate in the premises, may terminate this Lease and, lawfully, at his or their option immediately or at any time thereafter, without demand or notice, may enter into and upon said demised premises and every part thereof and repossess the same as of Lessor's former estate, and expel said Lessee and those claiming by, through and under Lessee and remove Lessee's effects at Lessee's expense, forcibly if necessary and store the same, all without being deemed guilty of trespass and without prejudice to any remedy which otherwise might be used for arrears of rent or preceding breach of covenant.

Neither the termination of this Lease by forfeiture nor the taking or recovery of possession of the premises shall deprive Lessor of any other action, right or remedy against Lessee for possession, rent or damages, nor shall any omission by Lessor to enforce any forfeiture, right or remedy to which Lessor may be entitled by deemed a waiver by Lessor of the right to enforce the performance of all terms and conditions of this Lease by Lessee.

In the event of any re-entry by Lessor, Lessor may Lease or relet the premises in whole or in part to any tenant or tenants who may be satisfactory to Lessor, for any duration, and for the best rent, terms and conditions as Lessor may reasonably obtain. Lessor shall apply the rent received from any new tenant first to the cost of retaking and reletting the premises, including remodeling required to obtain any new tenant, and then to any arrears of rent and future rent payable under this Lease and any other damages to which Lessor may be entitled hereunder.

Any property which Lessee leaves on the premises after abandonment or expiration of the Lease, or for more than ten days after any termination of the Lease by Landlord, shall be deemed to have been abandoned, and Lessor may remove and sell said property at public or private sale as Lessor sees fit, without being liable for any prosecution therefor or for damages by reason thereof, and the net proceeds of said sale shall be applied toward the expenses of Landlord and rent as aforesaid, and the balance of such amounts, if any, shall be held for and paid to the Lessee.

**HOLDING OVER** In the event the Lessee for any reason shall hold over after the expiration of this Lease, such holding over shall not be deemed to operate as a renewal or extension of this Lease, but shall only create a tenancy from month to month which may be terminated at will at any time by the Lessor.

**ATTORNEY FEES AND COURT COSTS** In case suit or action is instituted to enforce compliance with any of the terms, covenants or conditions of this Lease, or to collect the rental which may become due hereunder, or any portion thereof, the losing party agrees to pay such sum as the trial court may adjudge reasonable as attorney's fees to be allowed the prevailing party in such suit or action and in the event any appeal is taken from any judgement or decree in such suit or action, the losing party agrees to pay such further sum as the appellate court shall adjudge reasonable as prevailing party's attorney's fees on such appeal. The Lessee agrees to pay and discharge all Lessor's costs and expenses, including Lessor's reasonable attorney's fees that shall arise from enforcing any provision or covenants of this Lease even though no suit or action is instituted.

**WAIVER** Any waiver by the Lessor of any breach of any covenant herein contained to be kept and performed by the Lessee shall not be deemed or considered as a continuing waiver, and shall not operate to bar or prevent the Lessor from declaring a forfeiture for any succeeding breach, either of the same condition or covenant or otherwise.

**NOTICES** Any notice required by the terms of this Lease to be given by one party hereto to the other or desired so to be given, shall be sufficient if in writing contained in a sealed envelope, deposited in the U.S. Registered Mails with postage fully prepaid, and if intended for the Lessor herein then if addressed to said Lessor at P.O. Box 10047, Portland, Oregon 97210 and if intended for the Lessee, then if addressed to the Lessee at P.O. Box 83149, Portland, Oregon 97283-0149. Any such notice shall be deemed conclusively to have been delivered to the addressee thereof forty-eight hours after the deposit thereof in said U.S. Registered Mails.

**HEIRS AND ASSIGNS** All rights, remedies and liabilities herein given to or imposed upon either of the parties hereto shall extend to, inure to the benefit of and bind, as the circumstances may require, the heirs, executors, administrators, successors and, so far as this Lease is assignable by the term hereof, the assigns of such parties.



In construing this Lease, it is understood that at the Lessor or the Lessee may be more than one person at if the context so requires, the singular pronoun shall be taken to mean and include the plural, the masculine, the feminine and the neuter, and that generally all grammatical changes shall be made, assumed and implied to make the provisions hereof apply equally to corporations and to individuals.

This Lease includes the additional provision which appears below as Rider A.

IN WITNESS WHEREOF, the respective parties have executed this instrument in duplicate on this, the day and year first hereinabove written, any corporation signature being by authority of its Board of Directors.

SCHMITZER INVESTMENT CORP., LESSOR

BY: 

TITLE: Ulice President

<sup>ras</sup>  
NORTHWEST PIPE AND CASING COMPANY, LESSEE

BY: 

TITLE: Asst. Sec'y

Rider A

Lessor shall indemnify and hold harmless Lessee, its officers, directors, employees and agents, from and against any and all costs of environmental remediation, including, without limitation, attorneys' fees and expenses, arising out of the presence of any Hazardous Materials on, in, under or from the leased premises as of the effective date of this Lease.

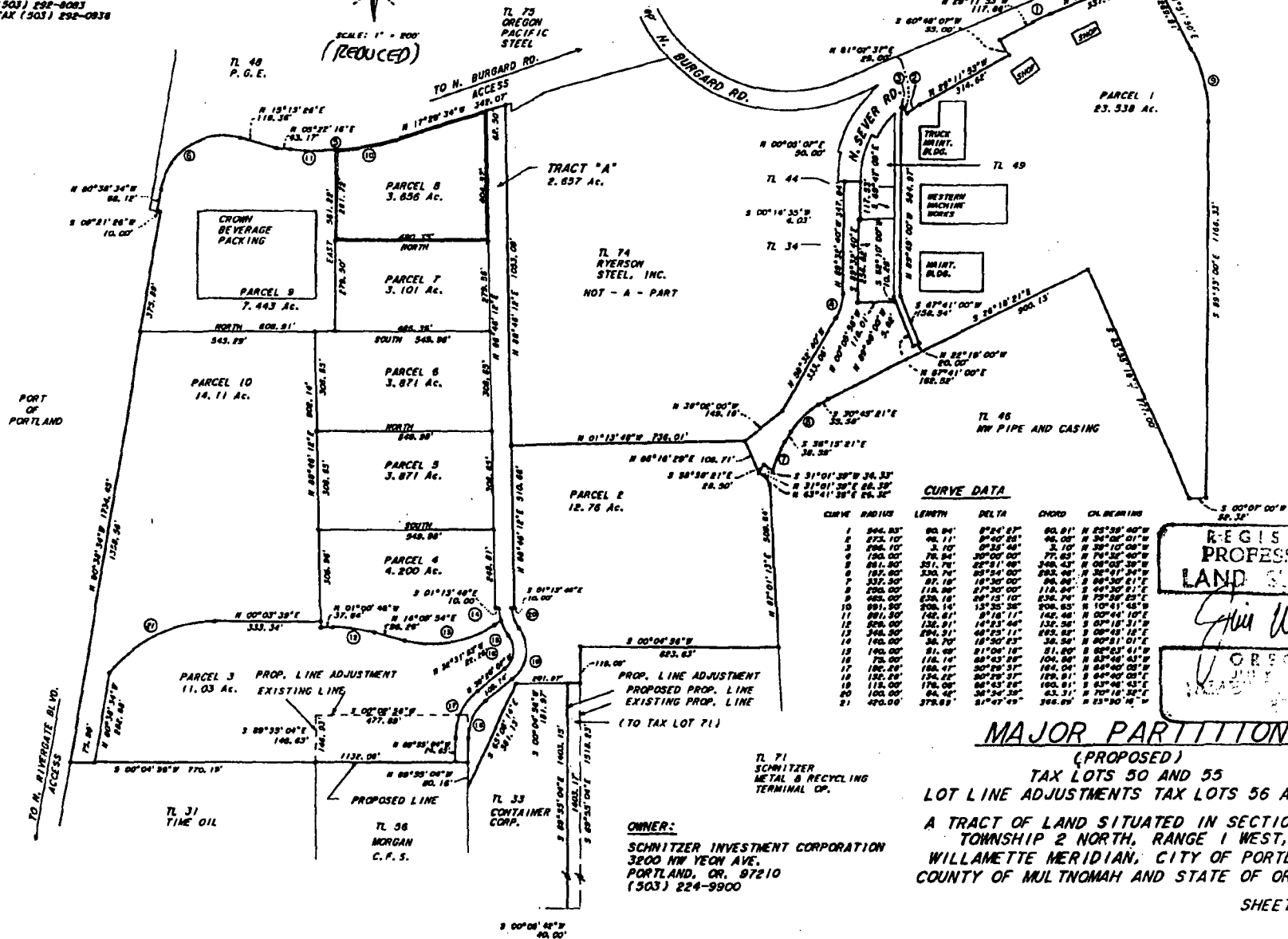
SCHN00272353



**SURVEYOR:**  
 Jim Weddle and Assoc., Inc.  
 1700 SW 34th Ave.  
 Portland, Oregon 97221  
 (503) 292-8083  
 FAX (503) 292-0938



SCALE: 1" = 200'  
 (REDUCED)



**CURVE DATA**

CURVE	RADIUS	LENGTH	DELTA	CHORD	CH. BEARING
1	544.83'	80.84'	8°24'53"	80.81'	N 25°35'40"W
2	273.10'	46.11'	8°40'54"	46.05'	N 34°08'01"W
3	266.10'	3.10'	0°35'46"	3.10'	N 35°10'08"W
4	190.00'	78.84'	30°00'00"	77.63'	N 74°35'40"W
5	861.30'	371.79'	22°21'08"	348.43'	N 08°08'30"W
6	187.80'	330.70'	30°54'00"	305.90'	N 30°41'34"W
7	337.30'	87.18'	16°30'00"	86.24'	N 80°30'21"E
8	200.00'	118.86'	27°30'00"	118.84'	N 44°30'21"E
9	465.00'	636.16'	08°15'10"	636.24'	N 75°58'23"E
10	891.30'	208.14'	13°35'36"	208.63'	N 10°41'45"W
11	891.30'	142.61'	8°18'11"	142.66'	N 02°44'10"E
12	876.00'	132.91'	14°51'44"	132.38'	N 07°18'31"W
13	348.30'	294.31'	48°25'11"	292.25'	N 00°48'18"E
14	140.00'	36.70'	18°30'23"	36.34'	N 00°51'01"E
15	140.00'	81.40'	01°04'16"	81.00'	N 00°53'11"W
16	73.00'	116.16'	68°43'28"	104.66'	N 63°48'43"W
17	186.26'	188.41'	30°29'37"	184.04'	N 84°00'00"W
18	150.24'	134.22'	50°29'37"	128.91'	N 84°40'00"E
19	118.00'	176.00'	66°43'28"	160.81'	N 63°48'43"E
20	100.00'	84.42'	36°34'39"	83.31'	N 70°16'28"E
21	470.00'	378.89'	51°47'49"	366.66'	N 23°30'16"W

REGISTERED  
 PROFESSIONAL  
 LAND SURVEYOR  
*Jim Weddle*  
 J. WEDDLE  
 JUNE 1988  
 MEASUREMENTS

**MAJOR PARTITION**  
 (PROPOSED)  
 TAX LOTS 50 AND 55  
 LOT LINE ADJUSTMENTS TAX LOTS 56 AND 71  
 A TRACT OF LAND SITUATED IN SECTION 35,  
 TOWNSHIP 2 NORTH, RANGE 1 WEST,  
 WILLAMETTE MERIDIAN, CITY OF PORTLAND,  
 COUNTY OF MULTNOMAH AND STATE OF OREGON

SCHN00272354



NSP TH



**RYERSON**

ENTRANCE  
ROAD

EXHIBIT "A"

CURVE DATA

DATE	READ
1	54
2	27
3	29
4	13
5	22
6	12
7	33
8	231
9	42
10	221
11	221
12	321
13	311
14	161
15	145
16	73
17	104
18	132
19	113
20	1003
21	403

RYERSON ————— 5.57 ACRES

SCHWITZER INVESTMENT CORPORATION  
3200 NW YEON AVE.  
PORTLAND, OR. 97210  
(503) 224-9900

PL PI  
 SCHWITZER  
 METAL & RECYCLING  
 TERMINAL OP.

8 00' 00" 45" 8  
19 00"

version locations.

**SCHN00272355**



BONE YARD AREA

SQUARE FEET: 259,894

ACRE: 5.97



SCHN00272356



BUFGARD STRATEGY REC

SCHN00272702





# Oregon

John A. Kitzhaber, M.D., Governor

Department of Environmental Quality

811 SW Sixth Avenue  
Portland, OR 97204-1390  
(503) 229-5696  
TDD (503) 229-6993

November 24, 1999

Mr. Tom Zelenka  
Schnitzer Group  
P.O. Box 10047  
Portland, Oregon 97296-0047

**CERTIFIED MAIL**

Re: Schnitzer Investment Corporation Site:  
Request for Performance of Remedial  
Investigation

Dear Mr. Zelenka:

This letter informs you of the results of our review of information regarding hazardous substance contamination at the Schnitzer Investment Corporation (Schnitzer) facility located at 12005 N. Burgard Road in Portland, Oregon. The Oregon Department of Environmental Quality has determined that the Schnitzer site is a high priority for a remedial investigation and feasibility study and requests that Schnitzer Investment Corporation perform a remedial investigation and feasibility study in accordance with the Environmental Cleanup Law, Oregon Revised Statutes (ORS) 465.200 *et seq.*

The Schnitzer facility is located within or near a portion of the Willamette River known as the Portland Harbor. A 1997 investigation revealed significant contamination of sediments within the harbor. DEQ has undertaken review of available information regarding properties throughout the harbor to identify potential sources of the sediment contamination. The results of DEQ's review, based on available site data, historical operations, (including the use of hazardous substances), and the presence of contaminants in adjacent sediments, for the Schnitzer facility are summarized in the enclosed Strategy Recommendation.

Available information indicates that a release of a hazardous substance has occurred or might have occurred at the Schnitzer facility and come to be located in Willamette River sediments. DEQ has determined that remedial action might be necessary to protect public health, safety, welfare and the environment and that a remedial investigation and feasibility study must be performed. The remedial investigation will fully identify, among other things, the source, nature, and extent of any releases of hazardous substances to sediments at or near the Schnitzer facility, and determine whether further remedial measures will be necessary at the Schnitzer facility. The feasibility study will be designed to select an appropriate remedy for the site.

DEQ proposes that your performance of the remedial investigation and feasibility study be governed by an agreement in the form of the enclosed Voluntary Agreement for a Remedial Investigation and Feasibility Study and Scope of Work. The facility's remedial investigation and feasibility study will be coordinated with harbor-wide sediments investigations currently being

DEQ-1

SCHN00272703



pursued by DEQ. This will require commencement of the remedial investigation and feasibility study at the Schnitzer facility in the near future.

**DEQ requests that you review the enclosed Strategy Recommendation and standard Voluntary Agreement and Scope of Work, and inform DEQ whether you are willing to perform a remedial investigation and feasibility study by signing and returning the enclosed Intent to Participate form within 30 calendar days of mailing of this letter. Upon receipt of the Intent to Participate, DEQ will forward you a Voluntary Agreement and Scope of Work specific to the Schnitzer facility, and request that any questions regarding the agreement be resolved so that the agreement may be entered no later than 60 calendar days from the mailing of this letter.**

Please note that, by signature and return of the Intent to Participate form, you would indicate a willingness to enter a Voluntary Agreement under the terms of the enclosed standard Voluntary Agreement. The second Voluntary Agreement that DEQ will forward you after receipt of the Intent to Participate will include the Schnitzer facility's name and other information specific to the facility. However, DEQ does not intend to substantially negotiate or revise the terms of the standard Agreement. The 60 days provided for entry of the Voluntary Agreement therefore should be sufficient.

Should you not indicate a willingness to perform the remedial investigation and feasibility study by return of the Intent to Participate form, or should you subsequently refuse to enter a Voluntary Agreement for the remedial investigation and feasibility study, DEQ will assume you are not willing to perform the remedial investigation and feasibility study. In this case, as with other facilities in the Portland Harbor, DEQ will exercise all remedies available to it under the Environmental Cleanup Law to ensure that necessary investigations are undertaken. These remedies include but are not limited to issuance of a unilateral administrative order requiring performance of the remedial investigation and feasibility study, and performance of the investigation by DEQ itself with subsequent cost recovery from liable parties.

Finally, please be advised that DEQ is required by ORS 465.330 to recover remedial action costs incurred by DEQ, including for site assessment activities. You will be receiving an invoice in the near future for DEQ's costs of preparing the Strategy Recommendation for the Schnitzer facility. Reimbursement of future DEQ costs will be provided through the voluntary agreement for the facility, if one is entered.

You may reach me at (503) 229-5648 if you have any questions related to the enclosed Strategy Recommendation.

Sincerely,



Eric Blischke, Coordinator  
Portland Harbor Study Area  
Waste Management and Cleanup Division

SCHN00272704



Enclosures

c: Kurt Burkholder, DOJ  
Dave St. Louis, Manager, NWR Site Assessment Program  
Mike Rosen, NWR Voluntary Cleanup Program  
Gil Wistar, Coordinator, Site Assessment Program  
ESCI File No.: 2355

SCHN00272705



**VOLUNTARY CLEANUP PROGRAM**  
**INTENT TO PARTICIPATE**

**Identification of Site**

Site Name: Schnitzer Investigation Corporation Site  
Site Address: 12005 N. Burgard Road in Portland, Oregon  
Owner/Operator: Schnitzer Group  
Mailing Address: Attn: Tom Zelenka, Schnitzer Group  
P.O. Box 10047, Portland, OR 97296-0047

**Intent to Participate**

The undersigned intends to negotiate in good faith a written agreement with DEQ to provide for voluntary performance of a remedial investigation under DEQ oversight. The agreement will describe the project activities of each party and will require the undersigned to reimburse DEQ for oversight costs.

With this Intent to Participate, the undersigned does not admit or assume liability regarding the site.

Please execute this Intent to Participate in the space below and return it to:

Eric Blischke  
Department of Environmental Quality  
Waste Management and Cleanup Division  
811 S.W. Sixth Avenue  
Portland, OR 97204

By: \_\_\_\_\_  
(signature of authorized  
representative)

Name: \_\_\_\_\_  
(print or type)

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Date: \_\_\_\_\_

Telephone: \_\_\_\_\_

SCHN00272706



**DEQ SITE ASSESSMENT PROGRAM - STRATEGY RECOMMENDATION**

**Site Name:** Schnitzer Investment Corporation -  
N Burgard (International Terminals)

**Site CERCLIS Number:** (none)

**DEQ ECSI Number:** 2355 e # 138 e # 2012

**Site Address:** 12005 N Burgard Road  
Portland, OR 97203

**Recommendation By:** Steve Fortuna and Tom Gainer, Voluntary  
Cleanup and Site Assessment Section, DEQ  
Northwest Region

**Approved By:** Mike Rosen, Manager, Voluntary Cleanup  
and Site Assessment, DEQ Northwest Region

**Date:** November 9, 1999 *Ch. Burt* FOR HER

**NOTE:** This site is within a 6-mile stretch of the Lower Willamette River in which the U.S. Environmental Protection Agency (EPA) conducted a sediment study in 1997. This area, referred to as the Portland Harbor, is between the upstream ends of Sauvie Island (River Mile 3.5) and Swan Island (RM 9.5). The purpose of this Strategy Recommendation is to determine whether a specific hazardous substance release or a specific past operation at the site can be linked to contamination documented by EPA in sediments adjacent to the site. Because of this focus, the Strategy Recommendation may omit some historical site information, regulatory issues, or further-action conclusions that might otherwise be included in a DEQ Strategy Recommendation.

Because of the complexity of current and historic industrial operations surrounding the Schnitzer Steel Industries' North Burgard operations, for the purposes of this Strategy Recommendation, the site boundaries are defined as all properties within the Burgard Industrial Park that are contiguously owned by Schnitzer Investment Corporation (Figure 1). The following operations are included in this strategy recommendation: Schnitzer Steel Industries, Inc., Premier Edible Oils Corp. (inactive), Western Machine Works, Inc., Boystun Metal Works, Inc., and Portland Container Repair Corp. Two properties located within the subject property, Jefferson Smurfit Corp. and Northwest Pipe Company, are owned by others and are not



included in this strategy recommendation; separate strategy recommendations have been completed for these facilities.

#### Background, Portland Harbor Sediment Evaluation

In September and October 1997, EPA's contractor, Roy F. Weston, Inc., collected 187 near-shore sediment samples within the Portland Harbor area defined above. Most samples (150) were collected as shallow grab samples within the upper 6 to 17 centimeters (cm) of sediments. 37 deeper composite core samples, from depths of between 55 and 139 cm, were also collected. All samples were analyzed for total metals, semi-volatile organic compounds (SVOCs), total organic carbon (TOC), and sediment grain size. Selected samples were also variously analyzed for organotins (TBTs), pesticides, polychlorinated biphenyls (PCBs), chlorinated herbicides, and polychlorinated dioxins and dibenzofurans.

Based on analytical results from this study, which showed extensive sediment contamination, EPA is currently considering Portland Harbor for inclusion on the federal National Priority List (NPL - also known as Superfund).

Between late 1998 and mid-1999, DEQ examined EPA's analytical data to determine potential sources for sediment contamination in the Harbor. Potential sources associated with the most contaminated areas of sediment were sites already active in DEQ's Cleanup Programs.

DEQ categorized other areas of sediment contamination (i.e., those areas not thought to be associated with active Cleanup Program sites) by defining the areas:

- having the highest detected concentration of a given contaminant;
- with contaminant concentrations in the upper five percent of a given contaminant's detected concentrations; and
- having contaminant concentrations above an apparent "baseline range" most commonly detected throughout the harbor area.

DEQ categorized in this manner because there are no established freshwater sediment contaminant concentration guidelines or well-defined background contaminant concentrations for the harbor area. The contaminant baseline range was developed by examining the geometric distribution of concentrations for each contaminant detected. Any sediment concentrations that appeared to depart



significantly from the ranges most commonly detected were suspected of lying near a potential contaminant source.

Eight shallow sediment samples (SD007, SD008, SD009, SD010, SD012, SD013, SD014, and SD016) and two deeper core composite sediment samples (SD007A and SD013A) were collected along contiguous properties within Burgard Industrial Park that are owned by Schnitzer Investment Corporation (Figure 2). Approximate site boundaries and sediment sample locations are outlined in Figure 2.

Shallow river sediments along the site contained concentrations of the following contaminants that exceeded Portland Harbor sediment baseline values (see Tables 1(a) and 1(b)):

antimony	chromium	butylbenzylphthalate
arsenic	iron	carbazole
barium	manganese	total low- and high-
cadmium	nickel	molecular weight
cobalt	zinc	polynuclear aromatic
copper	total organotins	hydrocarbons (LPAHs and
		HPAHs, respectively)

Shallow sediment concentrations of each of these contaminants were higher along the site than at either the nearest upstream (SD021 and SD025) or downstream (SD006) shallow sediment sampling locations, except for antimony, which was elevated in all sample locations. Barium, zinc, and butylbenzylphthalate were encountered at concentrations more than 50 percent above baseline values. Concentrations of antimony, carbazole, LPAHs, and HPAHs were encountered at more than twice the respective baseline values. At the mouth of the site's slip (SD012), the shallow sediment concentration of total organotins was more than 150 times the Harbor baseline value. Although PCBs, a potential contaminant of concern at the site (see this document's *Regulatory History* section), were not detected, they were analyzed at only one sediment sampling location (SD012).

Deeper composite core sediment samples contained concentrations of the following contaminants that exceeded Portland Harbor sediment baseline values (see Tables 1(a) and 1(b)):

arsenic	silver	dibenzofuran
cadmium	zinc	2-methylnaphthylene
lead	LPAHs	Total Organic Carbon (TOC)
mercury	HPAHs	

Mercury, zinc, dibenzofuran, total LPAHs, total HPAHs, and 2-methylnaphthylene were encountered at concentrations more than twice the respective Portland Harbor sediment baseline values. Deeper



sediment composite samples collected along the Schnitzer Investment properties were not analyzed for PCBs or organotins.

The nearest shallow sediment sample upstream from the Burgard Industrial Park is SD025, which had only antimony above baseline concentrations. Sampling point SD021 is located within Port of Portland's Slip 1. There is no representative deep sediment sample upstream from the Burgard Industrial Park. Deep sediment sampling points SD023 and SD031 were located within Port of Portland slips some distance away from the river's main channel (see Figure 1)<sup>1</sup>, and the nearest riverfront deep sediment sampling point (SD049) was located 1.1 miles upstream from the Burgard Industrial Park.

Following the 1997 EPA sediment sampling, SSI collected two shallow sediment samples from within their slip (sample locations SD-11 and SD-12, Figure 2) and three shallow samples at the mouth of the slip in August 1998. The two samples within the slip appear to be located in the center of the slip and do not appear to target any particular outfall(s). Bis(2-ethylhexyl)phthalate, butylbenzylphthalate, and HPAHs were detected in SSI's slip sediment samples above Portland Harbor baseline values and above concentrations at the mouth of the slip in EPA sediment sample SD012 (Table 1). There are numerous sites that discharge storm and process water to the slip (Figure 7), and it is not clear which sites contributed towards the observed sediment contamination in the slip. Note that SIC/SSI conducts periodic dredging in the slip, and that one such dredging event occurred in 1991.

The three samples collected at the mouth of the slip were located adjacent to EPA sample SD012 and were analyzed for organotins to confirm the EPA's highly elevated organotin concentration in SD012. SSI's three samples showed organotins below the baseline value, while highly elevated organotins were detected in Weston's sample SD012 (48,690 ppb). This suggests that the organotin sediment contamination is heterogeneous.

Schnitzer also split samples with Weston at the upstream corner of their slip (sample SD013a) and again detected organotins below baseline levels; Weston did not analyze for organotins in this sample. Some of SSI's data was of questionable quality due to high detection limits, exceeded holding times, and poor lab QA/QC/reproducibility, although analytical results were still similar to Weston results.

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<sup>1</sup> SD023 was located about 1,275 feet into Slip 1, while SD031 was located about 470 feet into Slip 3.



The sediment data suggest that significant sources of

barium	LPAHs	2-methylnaphthylene
mercury	HPAHs	butylbenzylphthalate
zinc	carbazole	
organotins	dibenzofuran	

sediment contamination may be located on, or near, the Schnitzer Investment's Burgard Industrial Park properties, and that these sources may also have contributed lesser amounts cadmium, chromium, cobalt, copper, lead, and manganese to river sediments.

### Operational History

Schnitzer Steel Industries (SSI) operates a scrap metal recycling yard and deep marine terminal on a 92.7-acre tract (Tax Lot 71 of 2N1W35) at the southwest corner of the Burgard Industrial Park in North Portland (Figure 3). The northern portion of this tract is occupied by the International Terminals slip. Schnitzer Investment Corporation (SIC) owns the tract where SSI operates, along with several other tracts comprising a total of about 200 contiguous acres within the Burgard Industrial Park (see Figure 3). SIC acquired its Burgard Industrial Park property in from Broadway Holding Company in 1972. The SIC properties completely envelope two independently owned industrial tracts (outlined in Figures 1-3): a 9.5-acre tract owned by Jefferson Smurfit Corporation, and a 25-acre tract owned by Multnomah Land & Equipment Company and leased to Northwest Pipe Company (ECSI #138). SIC sold an additional contiguous 13.6-acre tract along the site's northern boundary (see Figure 3) to RoMar Realty of Oregon in 1994.

A review of historic aerial photographs and Portland Business Directories indicate that the Burgard Industrial Park was generally undeveloped in 1936. From 1942 to about 1950 the primary industrial occupants of the site appear to have been Oregon Shipbuilding Corporation, Matson Terminals, Northwest Oil Corporation, and Electro Metallurgical Company, a chemical manufacturer. Oregon Shipbuilding Corporation may have occupied much or all of the upland portions of the current Schnitzer Steel Industries facility (see Figure 4). A 1963 aerial photograph suggests that fill was being placed over the former shipyard's launch ramps.

Since 1950, the Burgard Industrial Park has been the location of a broad variety of industrial operations (see Table 2). Businesses currently operating at the Burgard Industrial Park include:

- CalBag Metals Company (a nonferrous metals processor/recycler),
- Boydston Metal Works (a truck trailer manufacturer),
- Western Machine Works, Inc. (a machine shop),



- Portland Blast Media (a protective coatings manufacturer),
- Morgan CFS Company (containerized freight and cargo service/storage),
- Portland Container Repair (ocean shipping container repair / storage),
- Lecorn Trucking (truck transportation services),
- Schnitzer Steel Industries (metal recycling),
- TracLease (shipping container storage),
- Crown Cork & Seal Company, Inc. (metal beverage container warehousing),
- Northwest Pipe Company (steel and coated steel pipe and tube manufacturer),
- Dunkin & Bush, Inc. (a painting, sandblasting, concrete repair contractor),
- Joseph T. Ryerson & Son, Inc. (steel and metal roofing material wholesaler),
- Smurfit-Stone Container Corp. (a fiberboard box manufacturer)
- RoMar Transportation Systems, Inc. (truck transportation services), and
- Time Oil Company (bulk liquid and petroleum storage facility).

All but the last six companies on this list operate on properties currently owned by SIC. The following subsections summarize available information about these specific operations.

#### ***Schnitzer Steel Industries***

SSI processes, stores, and exports recyclable metals at its 93-acre riverfront tract. Shipping docks are located along the site's western riverfront and in an approximate 11-acre slip (International Terminals slip) located along the northern portion of the site. Ship salvaging operations are also conducted within the International Terminals slip.

A hammermill shredder, where white goods (such as home appliances) and whole automobiles are shredded for metal recovery, is located at the southwestern corner of the site (Figure 5). Metal and nonmetal components (such as plastics, auto seat cushion material, and insulation materials, called "auto fluff") are separated after shredding.

Auto fluff is stored at the shredder site prior to disposal at local landfills. Since 1993, DEQ has required SSI to periodically test its auto fluff for leachable (TCLP) cadmium, lead and PCBs prior to disposal. SSI's auto fluff test results from December 1995 and January 1996 showed concentrations of leachable cadmium (up to 5.8 parts per million, ppm) and lead (up to 17 ppm) that exceeded EPA's characteristic hazardous waste definition. PCB concentrations between 1993 and 1995 generally ranged between about 5 ppm and 25 ppm (high of 36.5 ppm and low of 2 ppm). To minimize contamination in the auto fluff, SSI notified its suppliers of white goods and crushed automobiles in November 1994 that items containing hazardous materials (such as asbestos, chlorofluorocarbon refrigerants, lead batteries, gasoline, oils, and PCBs) would not be accepted. "Stuffing" of car bodies (the placement of hazardous substances in the trunks, or saturating auto seat cushions and carpeting with waste automotive fluids prior to vehicle crushing operations) was



strictly forbidden; however, it is not clear if suppliers are always in compliance with this requirement.

A shearer and manual processing area is located along the southern edge of the slip where larger materials are salvaged (Figure 5). Calbag Metals Company, which recovers nonferrous metals, operates at the southeastern corner of the SSI site. Portions of other SIC tracts to the northeast, east, and southeast of the International Terminals slip are currently used, or have historically been used, to store scrap iron, steel, and other recoverables. An 11-acre tract (Lot 3) northeast of the Jefferson Smurfit facility has been used to store equipment and recyclables.

Primary wastes generated at SSI consist of:

- Non-metallic rail car and other scrap operations debris
- Used oil
- Used antifreeze
- Used non-halogenated solvent
- Solid wastes

SSI operates a water treatment system (flocculation) for re-circulated cooling water from the automobile shredder.

#### **Premier Edible Oils**

From 1991 to 1996, Premier Edible Oils Corporation processed, stored and shipped vegetable-based cooking oils at an 18.5-acre riverfront tract (ECSI #2013) of SIC property northwest of the International Terminals slip (Figure 3). Facilities included processing and blending buildings, a hydrogen plant, an aboveground storage tank farm, cooling towers, a maintenance shop, a warehouse, a truck loading area, and a ship unloading dock.

Palmco Incorporated conducted similar operations at the facility from about 1974 to 1990. C&T Quincy Foods leased the facility from SIC in 1997 for about one year as a temporary storage facility for food-grade cooking oils, but conducted no processing or purification operations at the site.

Aerial photographs indicate that several structures, including Premier's warehouse and dock, were present on the site in 1957, although the tank farm was not added until sometime between 1963 and 1977 (Figure 6). Site use prior to 1974 is unknown, although aerial photographs suggest that an aboveground pipeline originating at the site's dock passed along the full length of the Jefferson Smurfit site. A May 1957 aerial photo suggests that an underground pipeline may have linked the dock and Time Oil Company's northern tank farm.

Activities at the Premier Edible Oil site, including boat activity at their dock, may have contributed to the elevated concentrations



of petroleum constituents 2-methylnaphthalene, carbazole, dibenzofuran, and PAHs in sediment samples SD007 and SD008, collected in the vicinity of Premier's dock.

The Premier Edible Oils site was added to DEQ's ECSI data base in March 1997 after a November 1996 Phase II Site Assessment report indicated that site groundwater was contaminated with petroleum constituents and chlorinated solvents (discussed below in this document's *Investigation History* section).

#### **Boydston Metal Works**

Boydston Metal Works is located near the southeastern corner of the SIC properties, on the northern half of Lot 1 (southwest of the intersection of N Sever Road and N Time Oil Road, Figure 7). Boydston fabricates and paints automobile transport trailers. Manufacturing activities include steel and aluminum fabrication, painting (spray booth), and hydraulic/electrical fitting installation. Diesel, hydraulic oil, paint, hardeners, and solvents are used on site. Solvent is recycled on site and waste oil is treated off site.

Soil and groundwater contamination was encountered in a 1998 site investigation, discussed below in this document's *Investigation History* section.

#### **Other On-Site Operations**

Crown Cork & Seal Corporation leased a warehouse at the northeast corner of SIC's Burgard Industrial Park properties (Tax Lot 3 of Lot 9) in 1998-99 for storage of aluminum and steel beverage containers, although the warehouse now appears empty and is available for lease.

Portland Container Repair Corporation, a subsidiary of Morgan Trucking, has operated an ocean shipping container storage and repair facility northeast of the International Terminals slip (Lots 4 through 8). Morgan C.F.S. conducts truck maintenance operations in a facility north of the Jefferson Smurfit property.

Western Machine Works and Portland Blast Media are located near the southeastern corner of the SIC properties, on the northern half of Lot 1. Western Machine Works operates a machine shop. Portland Blast Media conducts sand blasting operations and manufactures protective coatings.

#### **Adjoining Facilities**

Northwest Terminal Company / Time Oil Company (ECSI #170) operates a bulk storage facility for petroleum products and other liquids on a 51-acre tract along the northwestern boundary of the SIC properties (Figures 2 and 3). Time Oil has been conducting an investigation and cleanup for pentachlorophenol-, PCB-, and waste oil-contaminated soils through DEQ's Voluntary Cleanup Program since 1996.



As previously mentioned, Jefferson Smurfit/Smurfit-Stone operates a corrugated fiberboard box manufacturing facility on a 9.5-acre tract located just north of the International Terminals slip.

RoMar Transportation operates a cargo warehousing facility on a 13.6-acre tract along N Time Oil Road, 900 feet northeast of the International Terminals slip. RoMar acquired the site from SIC in 1994.

Portland General Electric operates a large electrical substation on a 13-acre tract across N Time Oil Road from the northeast corner of the SIC properties.

Joseph T. Ryerson & Son, Inc., operates a steel roofing manufacturing facility and steel warehouse along the eastern edge of the SIC properties (Figure 3).

Dunkin & Bush, Inc., a painting, sandblasting, and concrete repair contractor, has a facility along N Sever Road, between the southern edge of the Ryerson facility and the SIC properties.

Northwest Pipe Company (ECSI #138) operates a steel pipe and tube manufacturing and coating facility southeast of the International Terminals slip on a 25-acre tract owned by Multnomah Land & Equipment Co. (Figure 3). Some of the company's manufactured pipe is stored at the southeast corner of the SIC properties, on the southern half of Lot 1. Northwest Pipe removed a leaking underground storage tank and approximately 1,900 cubic yards of soils contaminated with gasoline, oil, PAHs, chlorinated solvents, and PCBs from the site in 1988-91. After reviewing site cleanup reports under a 1991 limited Voluntary Cleanup agreement, DEQ's Site Response Section concluded that, although additional confirmation sampling would be required to assure that no residual soil or groundwater contamination remains, there was insufficient information to add the site to DEQ's Confirmed Release List or Inventory.

### Investigation History

#### **Schnitzer**

Following maintenance dredging of the slip in 1991, SIC had three samples collected from three stockpiles of dredge spoils located adjacent to the slip. Analytical results showed an average total hydrocarbons as oil and grease of 162 ppm, and zinc, lead, and copper above Portland Harbor baseline values. The final disposition of dredged material is not clear.



SSI collected water samples in February and December 1998 at the head of the slip "during a release to the outfall from an offsite source." The February 1998 sample contained 1.6 ppm gasoline and 460 ppm lube oil, and the December sample did not detect petroleum products.

#### **Boydstun**

A recent subsurface investigation (January 1998) at Boydstun encountered low concentrations of chlorinated solvents in groundwater (including a deep on-site industrial well). Soil was contaminated with metals, petroleum, and PCBs, but the source or extent of contamination was not determined. Abrasive blast media in near-surface soil had no leachable metals except for low levels of barium.

#### **Premier Edible Oils**

Extensive investigations have been conducted at the Premier Edible Oils site (ECSI #2013). The November 1996 Phase II Environmental Assessment reported groundwater contaminated with low levels of chlorinated solvents (used by Premier) and petroleum (gas, diesel, BTEX) used by both Premier and Time Oil. OWRD has logs for more recent (unreported) subsurface geoprobe investigations.

### **Regulatory History**

#### **Spills**

There have been numerous spills into the Willamette River in the vicinity of the subject site which have the potential to impact sediment:

Date	OERS #	Origin	Material	Notes
1/26/98	98-207	SSI outfall	unknown oil	200' x 200' sheen
2/27/98	98-454	unknown	unknown oil	100' x 100' sheen
9/30/98	98-2319	SSI dock	unknown oil	70' x 3' sheen
10/14/98	98-2484	unknown	hydraulic oil	300' x 2' sheen
10/28/97	97-2640	unknown	hydraulic oil	75' x 75' sheen
7/9/97	97-1781	SSI fire	various	runoff from autos
5/13/88	NA	Premier	palm oil	60' x 20' sheen
5/4/79	NA	unknown	unknown oil	100' x 75' sheen

#### **Water Quality Permits**

Schnitzer Steel has a stormwater permit. Stormwater analyses have detected elevated concentrations of TPH and metals similar to constituents seen in river sediments. Some of the metals concentrations have been up to 100 times acute freshwater aquatic toxicity level. DEQ WQ has issued one Notice of Noncompliance in January 1986 for elevated levels of oil/grease and pH at various outfalls.



#### **Hazardous Waste Generator Status**

SSI has RCRA large quantity generator status (ORD099155574).

Boydston operates as a small quantity generator (ORQ00003376), primarily due to generation of still bottom wastes. On July 29, 1996, DEQ issued Boydston a Notice of Violation and Assessment of Civil Penalty for mismanagement of hazardous wastes (e.g., failure to register as a generator, conduct hazardous waste determinations, and label waste tanks).

#### **River Sediment Dredging Permit**

Schnitzer has dredged their slip under permits from the Oregon Division of State Lands. One dredge sample showed elevated TPH along the northeast end of the slip (along Premier Edible Oils / Jefferson Smurfit). Higher petroleum concentrations were detected in the dredge spoils after it was placed on land along the slip. Contamination could potentially have come from the Premier Edible Oils site, a LUST release at Smurfit, or from Time Oil.

#### **Underground Storage Tanks (USTs)**

One 10,000-gallon gasoline and one 10,000-gallon diesel UST were removed in 1988 (Figure 5). According to Schnitzer, no evidence of contamination was reported during removal of the tanks. These activities pre-date DEQ UST record-keeping.

#### **Above Ground Storage Tanks (ASTs)**

SSI has ten ASTs with secondary containment that are used to store waste oil, hydraulic oil, and other petroleum products (Figure 5).

There are numerous ASTs used by the former Premier Edible Oils operations that stored acids, diesel, and oils.

Boydston has four ASTs for used oil, hydraulic oil, and diesel, with a total capacity of 2,425 gallons.

No information regarding AST releases is available.

#### **Air Quality Permits**

SSI has an air quality permit for their white goods/crushed auto shredder. A worker complaint stated that the shredder was generating excessive particulates, with special concern about asbestos. Uncontrolled particulates could fall directly to the river, or could fall on other areas of the site where runoff is directed to the river.

#### **Site Hydrogeology**

The facility lies along the northeastern bank of the Willamette River where deposits from high energy flood waters formed a



peninsular terrace at the convergence of the Willamette and Columbia Rivers. East and southeast of the site, the terrace slopes steeply downward toward the Willamette. The site lies on a bench of land between the river and base of the terrace, with the southern two-thirds of the site lying within the river's 100 year flood zone.

The Burgard Industrial Park is relatively flat with elevations generally ranging between 20 and 30 feet above mean sea level (MSL), although elevations drop sharply to 5 to 10 feet MSL in fringe areas along the river and slip. Site soils are largely comprised of sands with occasional interbedded layers of gravel, sandy silt, silt loam, clayey silt, or silty clay. A 258 foot deep boring at the Northwest Pipe site encountered no bedrock. Static groundwater levels have generally ranged between 6 and 18 feet bgs.

Much of the SIC property is paved. An extensive stormwater drainage system directs runoff from the eastern edge of the SIC property to a wetlands area that drains to the Columbia Slough (Outfall 23 of Figure 7). Runoff from the northern half and central southern half of the SIC properties is generally directed to the International Terminals slip (Outfalls 8 through 22 of Figure 7). Runoff from much of the southwestern quarter of the property is directed toward the river (Outfalls 1 through 7 of Figure 7). Runoff from Schnitzer Steel's shredder area is captured and used for cooling purposes or shipped off-site for treatment.

#### Pathway Summary

The SIC site lies in an area of mixed industrial, commercial, and residential use. Approximately 16 residences lie within 0.7 miles of the facility.

Site workers at the facility or trespassers could be exposed to contaminants in surface soil. Utility trench workers could potentially be exposed to subsurface contaminants through direct contact, inhalation, or incidental ingestion.

Oregon Water Resources Department (OWRD) has well logs for five wells located in the southeast corner of the site (near Boydston area) indicate combined domestic/industrial use. SSI has a water supply well that supplies non-potable cooling water for the automobile shredder (Figure 5). Northwest Pipe Company also has an industrial water supply well at their facility. There is city water and sanitary sewer service to Burgard Industrial Park.

Deep wells at WMR (former Union Carbide; former Oregon Steel Mills) across Burgard Road were historically used as site drinking water source. Oregon Steel Mills said that they switched to bottled water



source, but it is not known if Oregon Steel Mills uses the on-site well or if WMR uses bottled water.

The nearest significant wetland areas are located approximately 0.6 miles downstream at the mouth of Multnomah Channel.

Both recreational and subsistence fishing occur within the Lower Willamette River. Commercial fishing within the Portland Harbor is limited to a small Pacific lamprey fishery. Recreational boating, water skiing, swimming, and beach use also occur within the Harbor.

The Lower Willamette River provides habitat for 39 fish species, including populations of wild cutthroat trout, rainbow trout, and mountain whitefish. White sturgeon are plentiful within the Harbor. The Harbor is also an important migratory corridor, nursery habitat, and adult foraging area for two runs of chinook salmon, two runs of steelhead trout, and individual runs of coho and sockeye salmon.

Upper Willamette River populations of chinook and steelhead, which migrate through the Harbor, are listed as threatened species under the Federal Endangered Species Act. The Pacific lamprey is considered a federal species of concern.

Great blue herons, cormorants, osprey, mergansers, kingfishers, peregrine falcons, and bald eagles routinely forage within the Harbor. The area is also part of the wintering range for the Aleutian Canada goose. All are protected under the Migratory Bird Treaty Act. The Aleutian Canada goose is federally listed as threatened species. The peregrine falcon was federally listed as an endangered species, but was removed from the list in August 1999. The bald eagle is a threatened species, but was recently proposed to be removed from this list.

There is little data on the nature and extent of the benthic community within Portland Harbor sediments. However, it is known that contamination in the benthos, which is a protected beneficial use, can be the source of food-chain effects that radiate up to the species listed above, including humans.

The Lower Willamette River is water quality limited for the following toxic compounds:

- Dioxins/furans (water column and sediments);
- Mercury (fish tissue);
- Pesticides (water column and sediments);
- Polynuclear Aromatic Hydrocarbons - PAHs - (water column and sediments); and
- Trace metals (water column and sediments).



DEQ's Water Quality Division is developing Total Maximum Daily Load requirements (TMDLs) for these contaminants. A TMDL for dioxins (2,3,7,8-tetrachlorodibenzo-p-dioxin) was established in 1991.

#### Conclusions/Recommendations

NOTE: As indicated previously, this review is limited to establishing a link between site activities and contamination in adjacent Portland Harbor sediments. It does not necessarily represent a thorough review of available site data, and the conclusions and recommendations presented below may reflect this limited focus.

The following conclusions are based on the contents of this review:

- It appears that site activities have resulted in sediment contamination adjacent to the SIC site. Concentrations of antimony, carbazole, LPAHs, and HPAHs were encountered at more than twice the respective baseline values in adjacent shallow sediment. At the mouth of the site's slip, the shallow sediment concentration of total organotins was more than 150 times the Harbor baseline value. PCBs, a potential contaminant of concern at the site, were not detected, although they were analyzed at only one sediment sampling location (SD012). Elevated antimony concentrations observed in the upstream sediment samples indicates that upstream activities are potential sources for the antimony contamination observed adjacent to the site. The degree of antimony contaminant contribution from the subject site is not clear.
- Mercury, zinc, dibenzofuran, total LPAHs, total HPAHs, and 2-methylnaphthylene were encountered in subsurface sediment samples at concentrations more than twice the respective Portland Harbor sediment baseline values. Deeper sediment composite samples collected along the Schnitzer Investment properties were not analyzed for PCBs or organotins.
- Although the slip was dredged as recently as at least 1991, shallow sediment samples collected in 1998 from the slip had elevated concentrations of bis(2-ethylhexyl)phthalate, butylbenzylphthalate, and HPAHs. Storm and process water discharges to the slip from the surrounding properties are the likely sources.
- Elevated concentrations of sediment contaminants adjacent to the site are generally consistent with current and historical site activities. PAH contaminants found in the sediment are associated with handling, storage, documented spills, and storm



water discharges of petroleum products. Carbazole and dibenzofuran are often found in heavy petroleum products and petroleum combustion products. Elevated metals have been detected in SSI's storm water discharge. Organotins are associated with ship coatings, and sediment contamination may have resulted from historic ship building activities.

- Activities at the Premier Edible Oil site, including boat activity at their dock, may have contributed to the elevated concentrations of petroleum constituents 2-methylnaphthalene, carbazole, dibenzofuran, and PAHs in sediment samples SD007 and SD008, collected in the vicinity of Premier's dock.
- Based on contaminant concentrations that are less than baseline levels in two sediment samples collected immediately upstream of the subject property, the SIC property appears to be the source of elevated contaminant concentrations described above (except for antimony).
- The two properties located within the SIC property - Multnomah Land & Equipment Co. (Northwest Pipe) and Jefferson Smurfit Corp. - may also contribute towards sediment contamination adjacent to the SIC property, although their contribution appears to be relatively less than from the SIC property based on a review site histories.

Contamination of river sediments adjacent to the SIC site may represent a threat to human health and aquatic life within the river. The specific nature and significance of these threats cannot be determined without further characterization and delineation of contamination in groundwater, subsurface soil, and sediments. A Remedial Investigation (RI) is required to evaluate the potential threat to human health and the environment at the Schnitzer site. It is recommended that once the full character and extent of site sediment contamination has been determined, a Risk Assessment, including sediment bioassays and bioaccumulation assessment, be conducted. Because the Lower Willamette River represents a valuable resource for recreation and fish and wildlife habitat, DEQ has determined that these actions warrant a high priority for follow-up.

Based on documented groundwater contamination on the former Premier Edible Oils site and documented contamination at Boydston Metal Works, it is recommended to propose adding the subject site to DEQ's Confirmed Release List.



## References

DEQ consulted the following general references in preparing this Strategy Recommendation:

1. Portland Harbor Sediment Investigation Report, prepared by Roy F. Weston, Inc. for USEPA, May 1998.
2. Schnitzer Steel Industries, Inc. response to DEQ Site Assessment Information Request, March 19, 1999.
3. Boydstun Metal Works, Inc. response to DEQ Site Assessment Information Request, March 16, 1999.
4. Western Machine Works, Inc. response to DEQ Site Assessment Information Request, March 11, 1999.
5. Portland Container Repair Corp. response to DEQ Site Assessment Information Request, March 10, 1999.
6. Level II Sampling Study, prepared by EMS for Boydstun Metals, January 20, 1998.
7. Phase II Environmental Site Assessment, prepared by AGRA Earth & Environmental, Inc. for Premier Edible Oils, Corp., November 29, 1996.
8. Phase II and III Environmental Site Assessment, prepared by Quality Group, NW for Schnitzer Steel Industries, Inc., August 19, 1994.
9. Technical Review and Sampling Study, prepared for Schnitzer Investment Corp. by Technical Action Group, Inc., July 27, 1993.
10. DEQ LUST Database.
11. DEQ HWIMSY Hazardous Waste Generator Database.
12. DEQ SPINS Spill Database.
13. MetroScan Property Records, Multnomah County, Oregon.

## Attachments

Table 1(a and b): River Sediment Contaminant Concentrations

Table 2: Burgard Industrial Park- Business Directory Listings

Figure 1: Site Location



Figure 2: Sediment Sampling Locations

Figure 3: Burgard Industrial Park

Figure 4: Former Oregon Shipbuilding Corp. Facilities

Figure 5: Petroleum Storage Areas

Figure 6: Premier Edible Oils- Site Features

Figure 7: Stormwater Drainage and Outfalls



**TABLE 1(a)**  
**River Sediment Contaminant Concentrations (EPA/DEQ 1997)**  
**Schnitzer Investments / Schnitzer Steel**

**Metals**

Contaminant	Units	Schnitzer Investment Properties													Up-Stream		Apparent
		Down-Stream	SD007	SD007A*	SD008	SD009	SD010	Slip Mouth			SD013	SD013A	SD014	SD016	SD021	SD025	Portland Harbor Sediment Baseline Maximum Value
		SD006						SD012	SD-11 **	SD-12 **							
Aluminum	ppm	42100	42700	41300	39200	39100	42100	24600	20500	16200	40000	36300	37600	41700	43300	34700	42800
Antimony	ppm	9	10	<4	10	9	11	8	<5	<5	9	<4	11	11	10	10	<5
Arsenic	ppm	<5	<5	5	<5	<5	<5	<4	3	4	5	<4	<5	7	<5	<5	<5
Barium	ppm	200	190	191	322	178	193	124	121	142	186	175	183	198	194	185	195
Beryllium	ppm	0.7	0.7	0.63	0.6	0.6	0.69	0.4	<1	<1	0.66	0.59	0.85	0.7	0.7	0.7	0.7
Cadmium	ppm	0.4	0.3	0.7	0.6	0.3	0.3	0.2	<0.2	0.3	0.4	0.8	0.4	0.4	0.4	0.3	0.6
Chromium	ppm	39.1	38.9	39.3	38.4	36.1	38.3	22.2	20	23	37	37.8	38.4	60.7	38.9	36.5	41
Cobalt	ppm	18.9	18.8	17.4	18.1	18.6	20.4	14	13	14	18	18.3	17.9	18.8	18.4	18.5	19.7
Copper	ppm	45.7	43	50.5	64.8	40.5	44.8	61.5	30	36	45.9	57.5	43.4	55.8	45.3	42.8	60
Iron	ppm	43500	42300	41400	41500	41100	44600	30700	25800	28200	40800	39900	40200	48000	43900	41100	45000
Lead	ppm	12	9	34	20	9	8	6	12	24	9	41	10	18	12	15	30
Manganese	ppm	764	725	545	479	682	815	440	528	593	671	495	663	653	792	701	810
Mercury	ppm	0.08	0.05	0.34	0.08	0.05	0.05	0.03	0.07	0.06	0.06	0.27	0.06	0.06	0.06	0.05	0.10
Nickel	ppm	30	29	31.5	29	28	30.4	19.5	18	20	28.4	30	27.9	34	30	29.0	32
Selenium	ppm	<5	<5	11	<5	<5	<5	<4	<1	<1	<5	8	<5	<5	<5	<5	15
Silver	ppm	0.5	0.4	1.4	0.4	0.4	0.4	0.3	<1	<1	0.5	1.5	0.6	0.6	0.5	0.4	1.4
Thallium	ppm	6	6	5	9	7	10	6	<1	<1	9	<4	11	8	10	8	13
Titanium	ppm	---	---	---	---	---	---	1500	973	940	---	---	---	---	2030	---	2075
Vanadium	ppm	107	107	103	101	102	112	76.8	63	66	103	98.7	98.5	102	112	103	112
Zinc	ppm	107	93.2	198	228	90.9	96.3	180	62	101	94.7	255	97.6	132	97.7	98.4	118
Water Depth	//	43	28	28	46	25	30	26	7	7	35	30	34	57	42	20	---
Sediment Sample Depth	cm	0-17	0-17	0-102	0-15	0-17	0-17	0-12	0-12	0-12	0-12	0-82	0-16	0-17	0-17	0-18	---
Off Shore Distance	//	220	175	175	265	145	145	(145) ***			175	175	160	235	(30) ****	60	---

\* Slight chemical odor noted at 91-99 cm depth in core SD007A.

\*\* Collected and analyzed by Schnitzer Steel Industries, Inc.; some holding times and lab QA/QC parameters were exceeded.

\*\*\* Collected at mouth of slip.

\*\*\*\* Collocated within Port of Portland Slip 1.

XX.X Values in bold indicate concentrations greater than baseline values.

XX.X Indicates concentration more than 50 percent higher than baseline value.

XX.X Indicates concentration more than twice the baseline value.

SCHN00272724



TABLE 1(b)

River Sediment Contaminant Concentrations (EPA/DEQ 1997)  
Schnitzer Investments / Schnitzer Steel

## Organics / Pesticides

Schnitzer Investment Properties															Apparent		
Contaminant	Units	Down-Stream SD006	SD007	SD007A*	SD008	SD009	SD010	Slip Mouth			SD013	SD013A	SD014	SD018	Up-Stream SD021	Up-Stream SD025	Portland Harbor Sediment Baseline Maximum Value
								SD012	SD-11**	SD-12**							
2-Methylnaphthalene	ppb	<20	<19	360	30	28	<20	<19	<5	<5	<19	<20	<19	<20	<20	<19	150
4-Methylphenol	ppb	<20	<19	240	<19	<19	<20	<19	---	---	<19	230	<19	29	<20	20	660
Benzoic Acid	ppb	<200	<190	<200	<190	<190	<200	<190	<2000	<2000	<190	<200	<190	<200	<200	<190	<200
Benzyl Alcohol	ppb	<20	<19	<20	<19	<19	<20	<19	<300	<300	<19	<20	<19	<20	<20	<19	<20
bis(2-Ethylhexyl)phthalate	ppb	320	<110	37	210	<180	<89	<70	200	420	<1200	220	<110	<130	<130	<120	390
Butylbenzylphthalate	ppb	<20	<19	<20	<19	<19	<20	<19	24	19	<19	<20	<19	31	<20	<19	<20
Carbazole	ppb	31	<19	73	220	29	<20	<19	<10	<10	19	93	24	37	42	25	100
Di-n-Butylphthalate	ppb	<20	<19	<20	<19	<19	<20	<19	<10	<10	<19	<20	<19	<20	<20	<19	<20
Di-n-Octylphthalate	ppb	<20	<19	<20	<19	<19	<20	<19	<10	<10	<19	<20	<19	<20	<20	<19	<20
Dibenzofuran	ppb	<20	<19	150	48	53	<20	<19	<5	<5	<19	240	<19	<20	<20	<19	100
Dimethylphthalate	ppb	<20	<19	<20	<19	<19	<20	<19	<10	<10	<19	<20	<19	<20	<20	<19	<20
Pentachlorophenol	ppb	<99	<96	<98	<96	<97	<99	<97	<300	<300	<96	<98	<96	<99	<99	<95	Detected
Phenol	ppb	<20	<19	<20	<19	<19	<20	<19	<50	<50	<19	<20	<19	<20	<20	<19	<20
LPAHs (total)	ppb	223	147	3481	1208	549	38	44	111	100	68	5604	80	184	287	259	700
HPAHs (total)	ppb	1057	657	8060	7770	1294	417	909	3341	1458	870	10660	1114	1604	2203	1986	2400
DDTs (total)	ppb	---	---	---	---	---	---	1.4	9	<30	---	---	---	---	10.4	---	220
PCBs (total)	ppb	---	---	---	---	---	---	<39	---	---	---	---	---	---	<40	---	<180
Organotins (total)	ppb	---	---	---	---	---	---	48680	121	186	---	---	---	---	119.1	---	300
2,4-D	ppb	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<3.3
2,4-DB	ppb	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<5
TOC	%	12.0	1.1	2.3	1.3	1.2	1.3	1.1	1.4	1.3	1.0	2.4	1.2	1.2	1.2	1.1	2.0
Water Depth	ft	43	26	28	46	25	30	26	7	7	35	30	34	57	42	20	---
Sediment Sample Depth	cm	0-17	0-17	0-102	0-15	0-17	0-17	0-12	0-12	0-12	0-12	0-82	0-16	0-17	0-17	0-16	---
Off Shore Distance	ft	220	175	175	265	145	145	(145)***	---	---	175	175	160	235	(30)****	60	---

\* Slight chemical odor noted at 91-99 cm depth in core SD007A.

\*\* Collected and analyzed by Schnitzer Steel Industries, Inc.; some holding times and lab QA/QC parameters were exceeded.

\*\*\* Collected at mouth of slip.

\*\*\*\* Collected within Port of Portland Slip 1.

XX.X

Values in bold indicate concentrations greater than baseline values.

XX.X

Indicates concentration more than 50-percent higher than baseline value.

XX.X

Indicates concentration more than twice the baseline value.

SCHN00272725



Figure 3

## Burgard Industrial Park

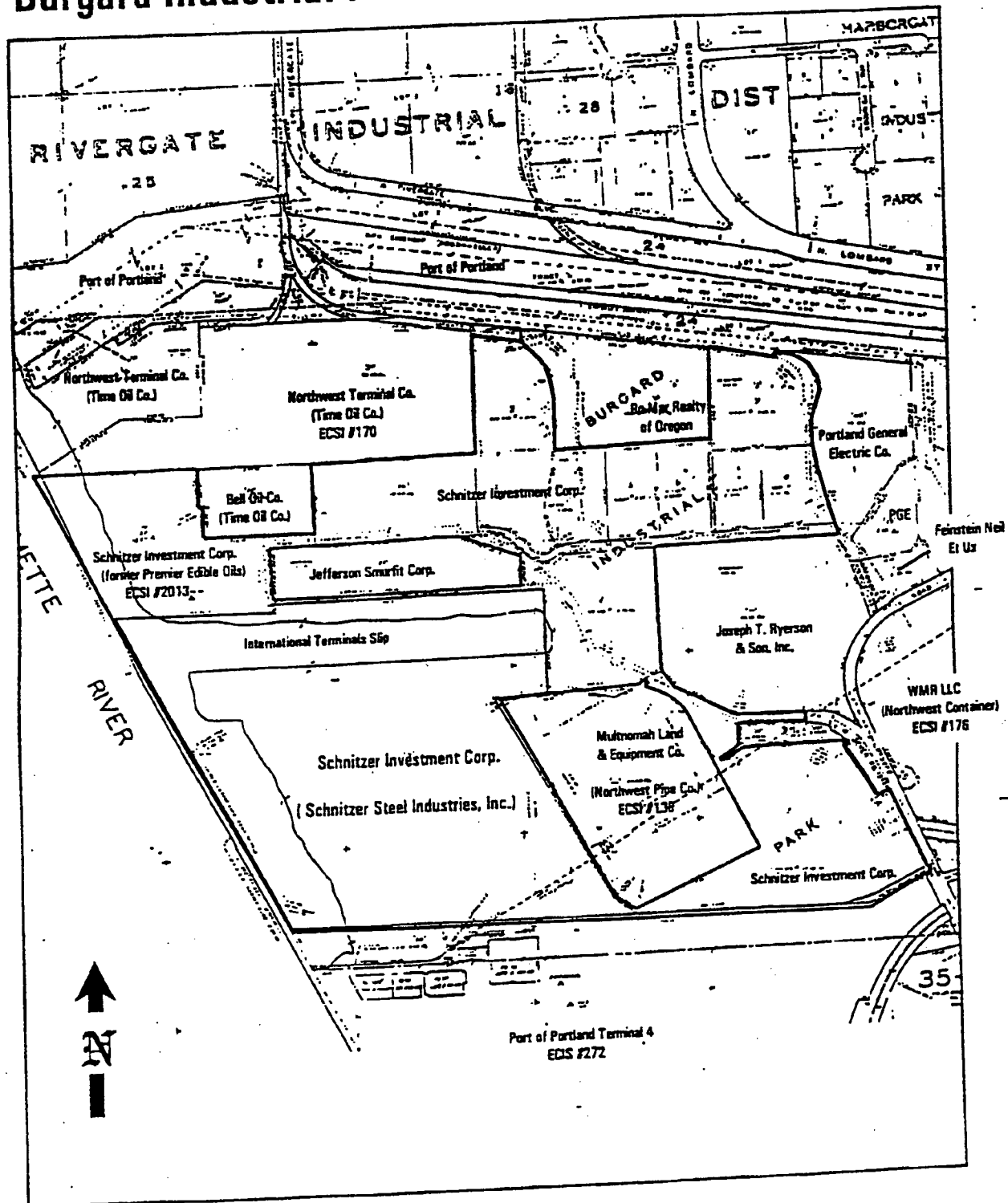
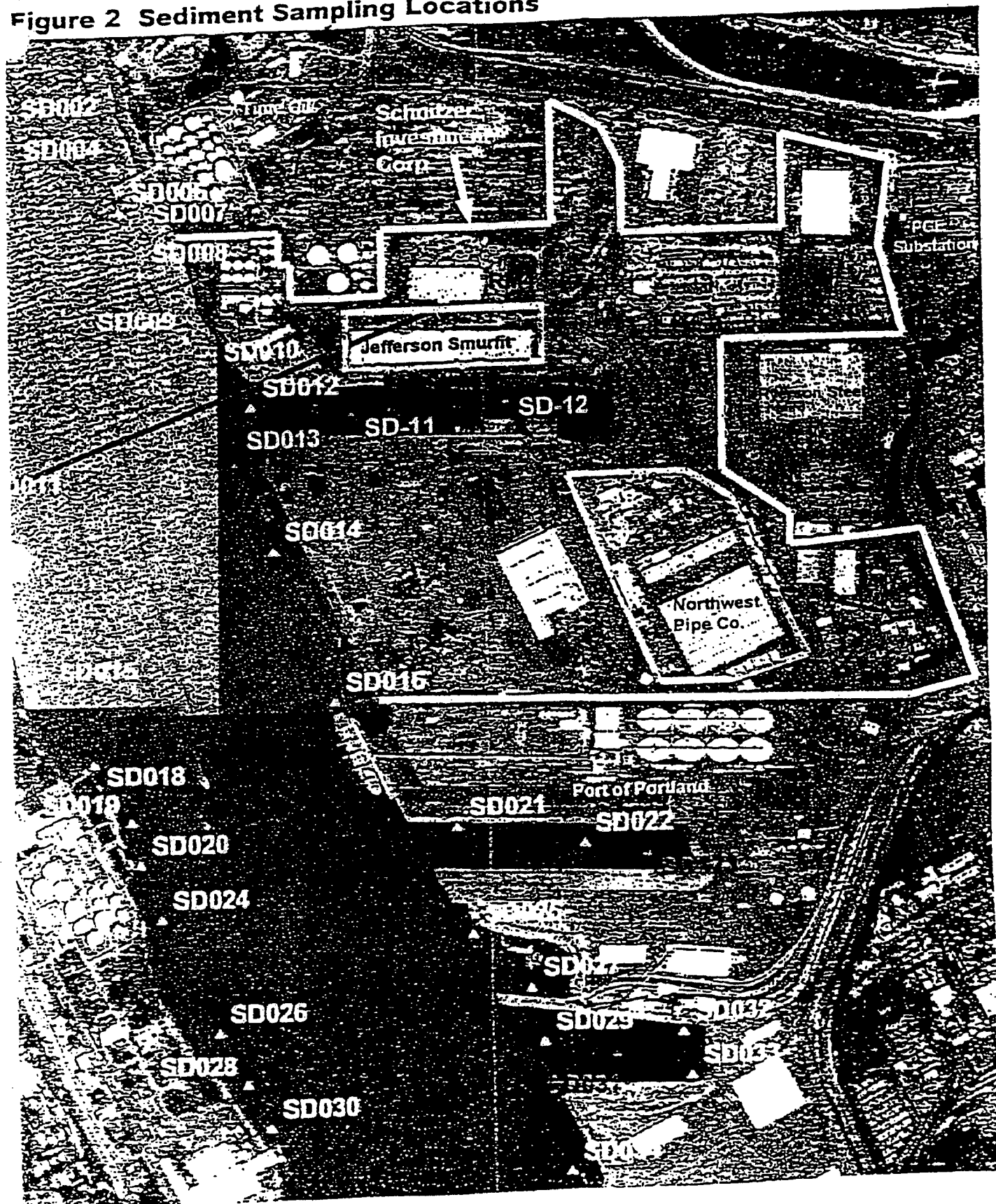
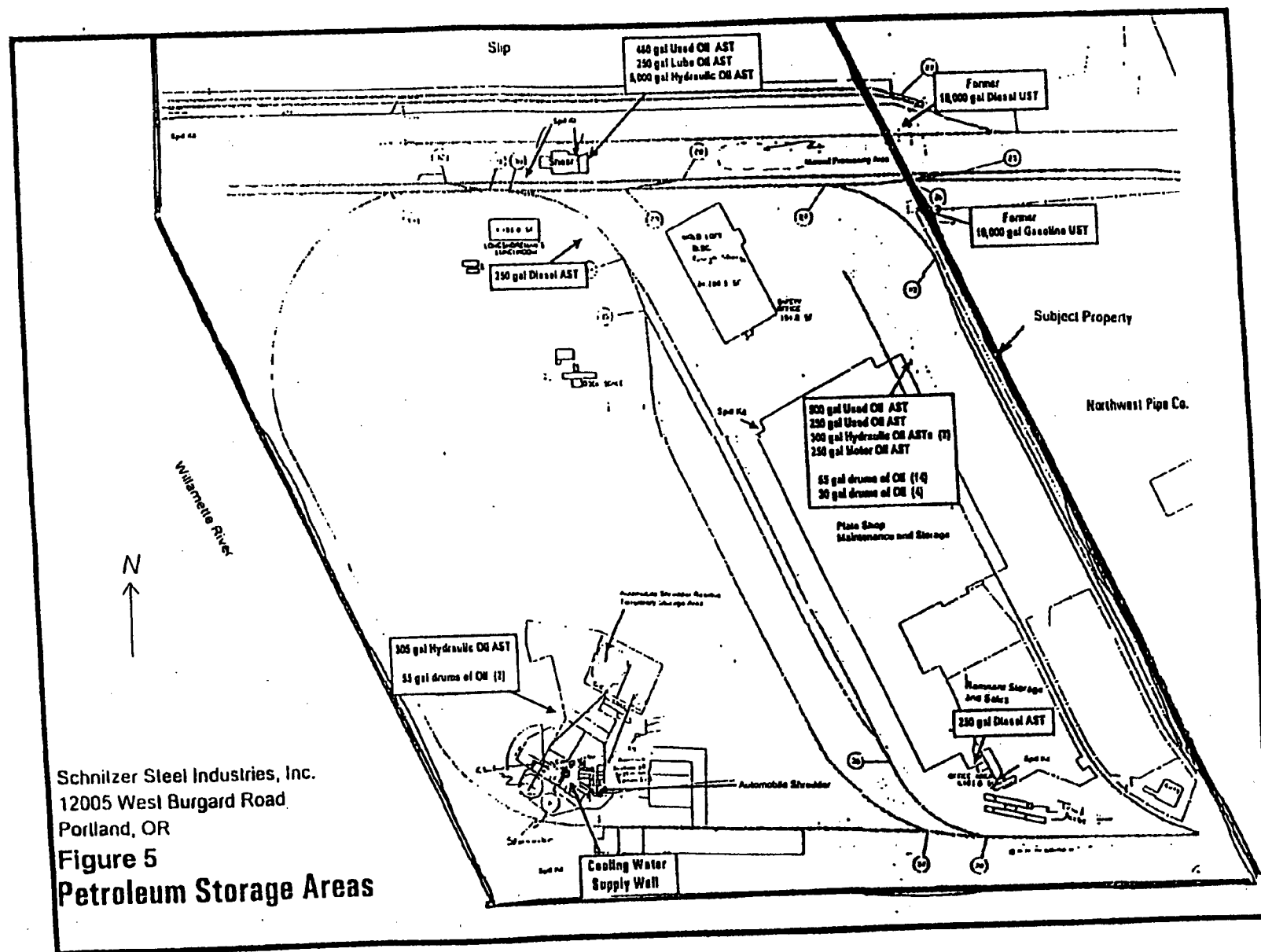




Figure 2 Sediment Sampling Locations







SCHN00272728



Figure 4

Former Oregon Shipbuilding Corporation facilities, and  
current Schnitzer Steel Industries site (May 1957 aerial photo)

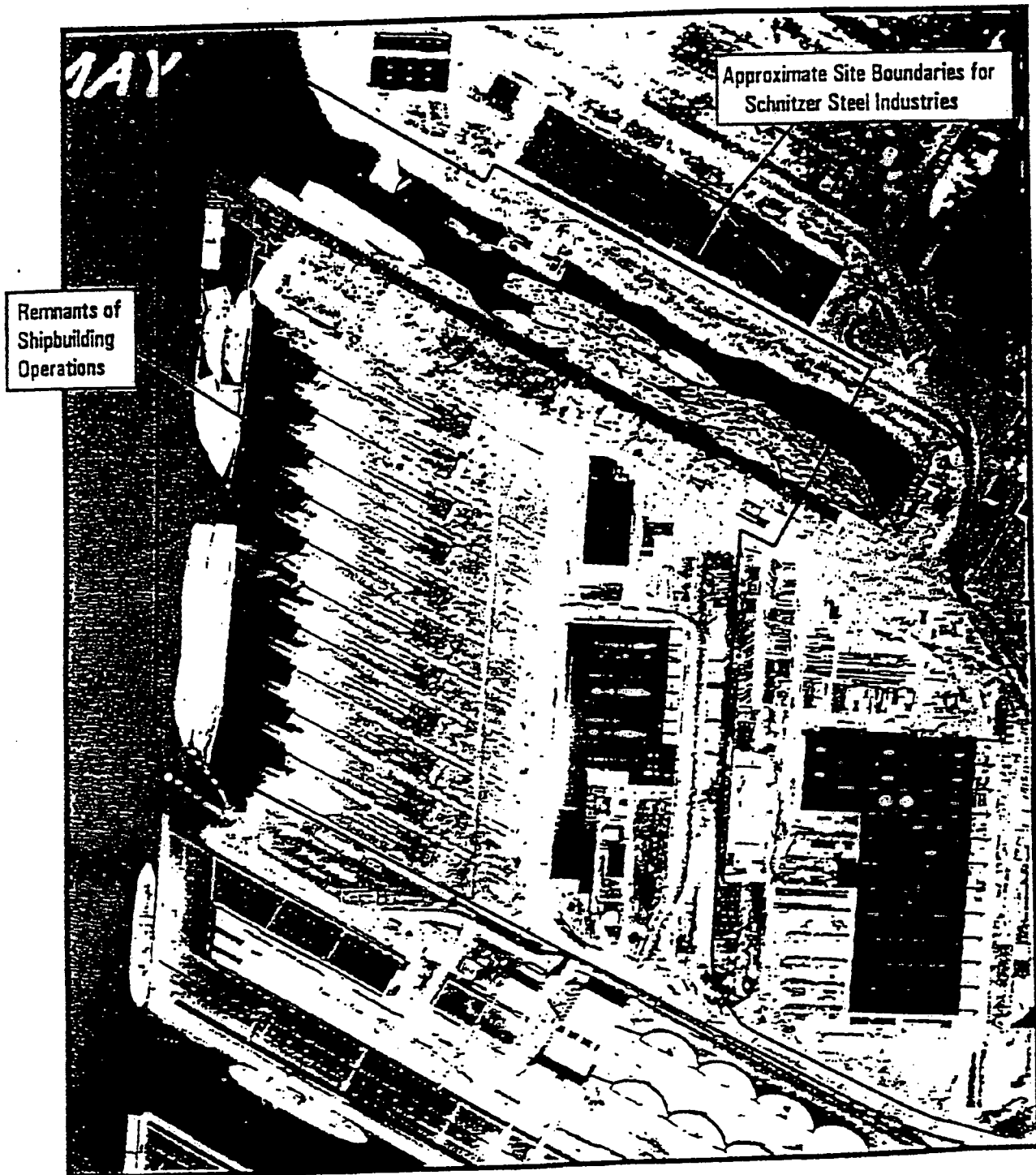
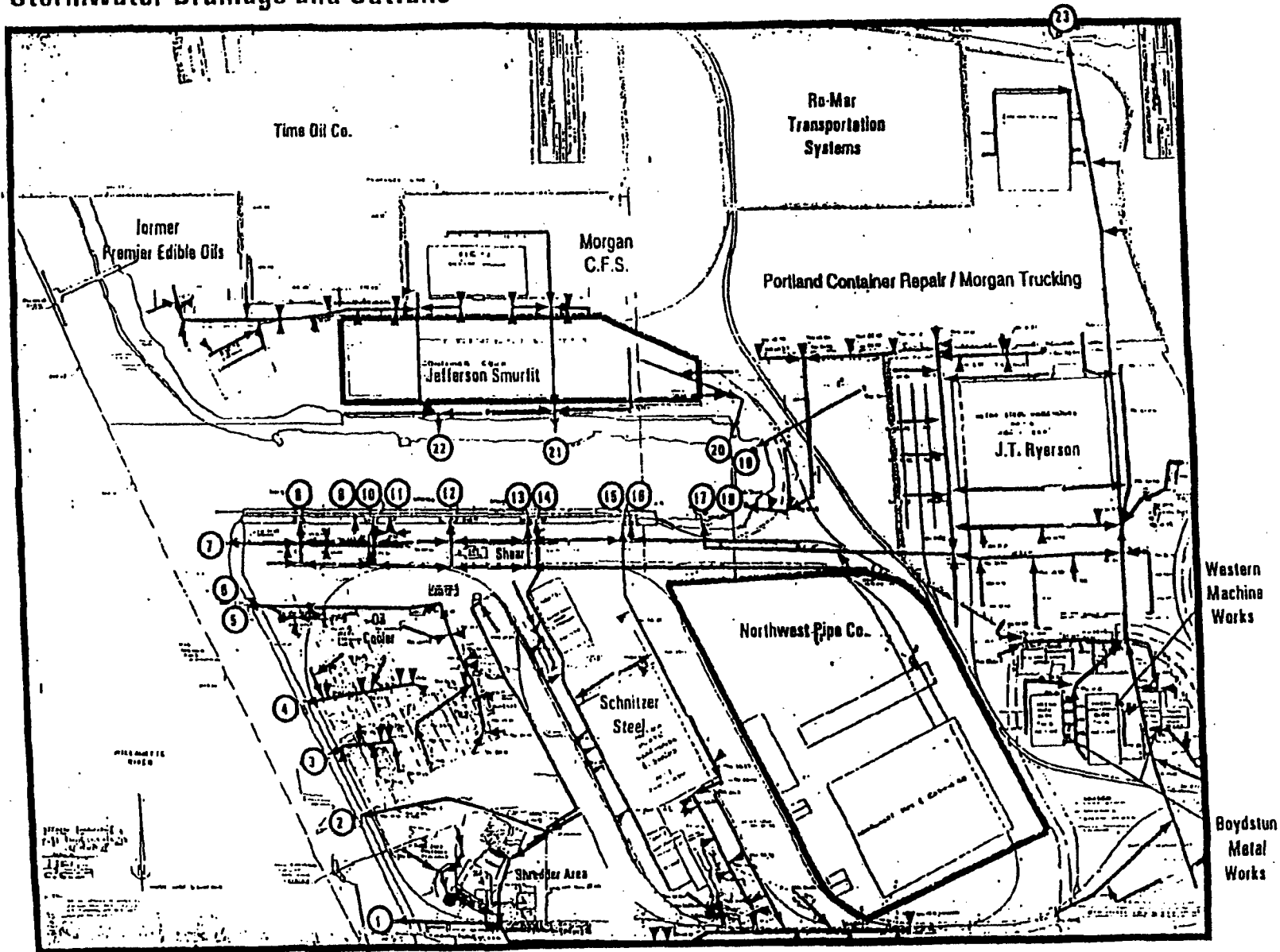




Figure 1

Stormwater Drainage and Outfalls

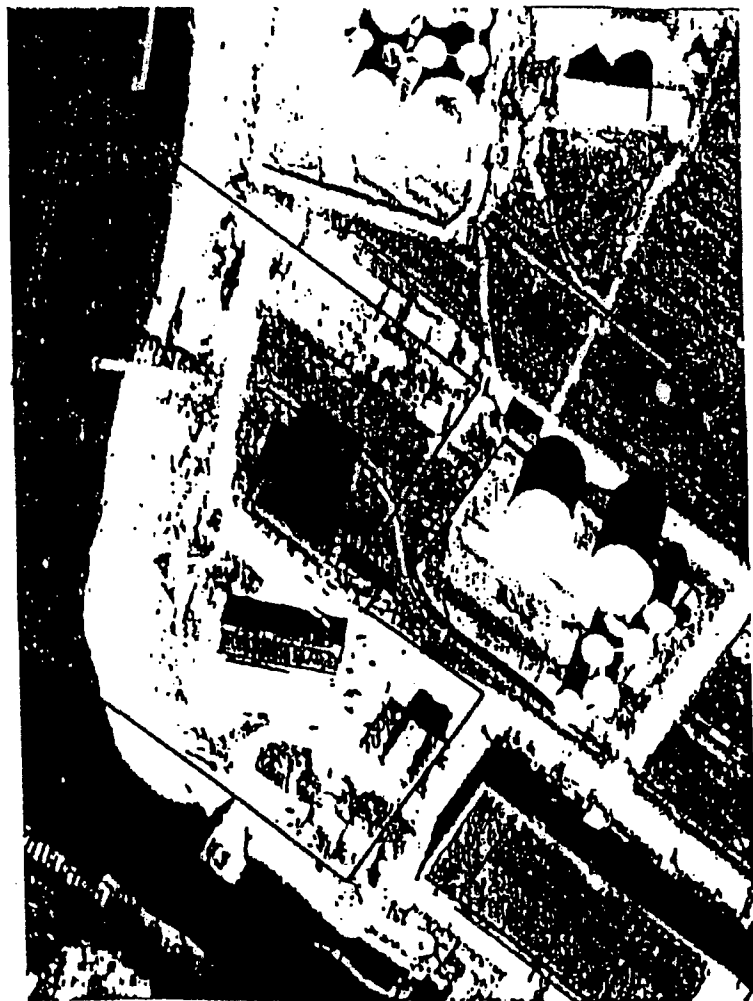


SCHN00272730

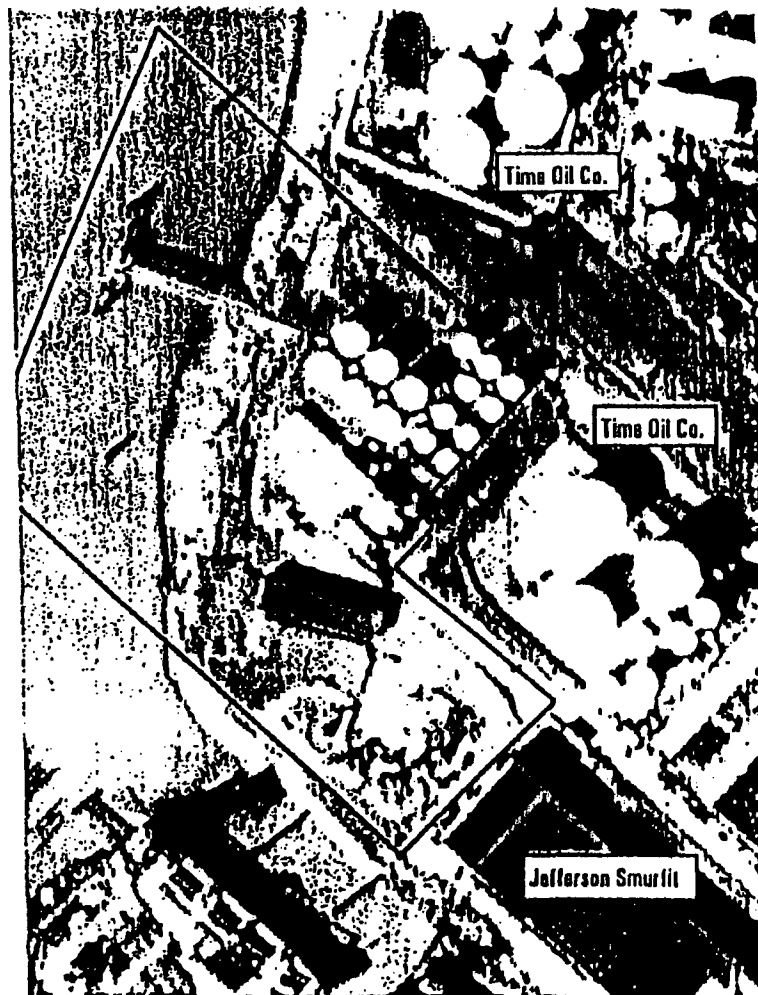


Figure 6

## Premier Edible Oils - Site Features



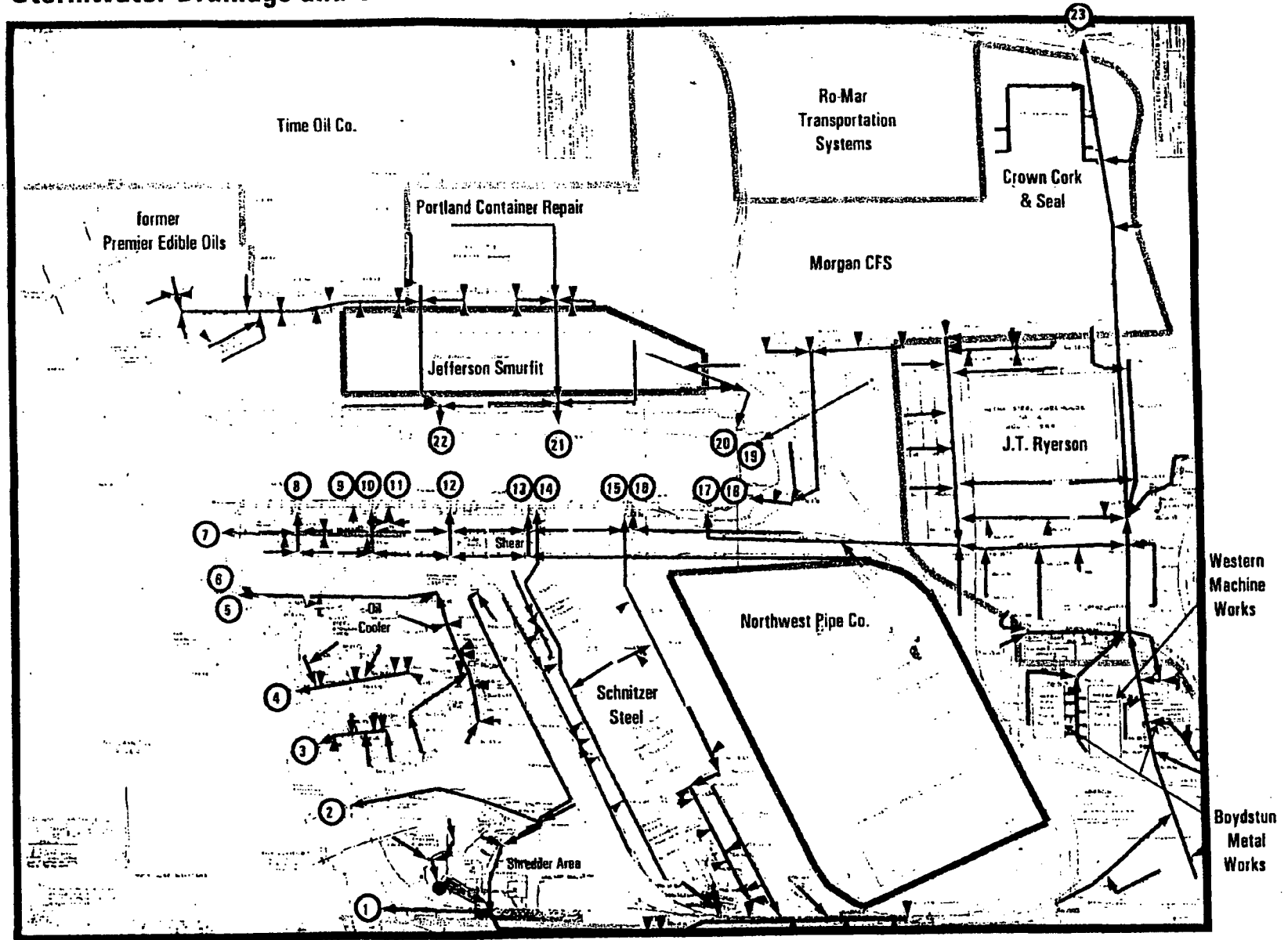
December 1963



December 1977



# Stormwater Drainage and Outfalls



SCHN00272732



**VOLUNTARY CLEANUP PROGRAM**  
**INTENT TO PARTICIPATE**

**Identification of Site**

Site Name: Schnitzer Investment Corp. \*

Site Address: 12005 Burgard Road in Portland, Oregon

Owner/Operator: Schnitzer Steel Industries, Inc.

Mailing Address: Attn: Tom Zelenka, Schnitzer Group  
P.O. Box 10047, Portland, OR 97296-0047

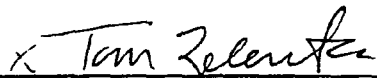
**Intent to Participate**

The undersigned intends to negotiate in good faith a written agreement with DEQ to provide for voluntary performance of a remedial investigation under DEQ oversight. The agreement will describe the project activities of each party and will require the undersigned to reimburse DEQ for oversight costs. \*\*

With this Intent to Participate, the undersigned does not admit or assume liability regarding the site.

Please execute this Intent to Participate in the space below and return it to:

Eric Blischke  
Department of Environmental Quality  
Waste Management and Cleanup Division  
811 S.W. Sixth Avenue  
Portland, OR 97204

By:   
(signature of authorized  
representative)

Name: Tom Zelenka  
(print or type)

Title: Manager, Legislative/  
Environmental & Public Affairs

Company: Schnitzer Steel Industries, Inc.

Date: December 22, 1999

Telephone: 503-323-2821

SCHN00272733



\* Excluding that portion of the site formerly leased to Palmco Incorporated, Premier Edible Oils and C&T Quincy Foods.

\*\* Schnitzer Investment Corp. is willing to sign a Voluntary Cleanup Agreement to perform such remedial investigation and feasibility study activities and reimburse Oregon DEQ for such costs as Oregon DEQ has a statutory right to require from it under the Environmental Cleanup Law, Oregon Revised Statutes 465.200 et seq., provided that the terms of such agreement are acceptable to it and are as favorable as the terms provided to other entities performing voluntary investigation and feasibility studies within the Portland Harbor. To the extent Schnitzer Investment Corp.'s obligations are dependent upon cooperation from its tenants, it shall use its best efforts to obtain such cooperation, but it is not a guarantor of performance by its tenants. Schnitzer Investment Corp. notes that DEQ's Strategy Recommendation contains factual inaccuracies and refers to several historical activities which have not occurred during the time period of Schnitzer Investment Corp.'s ownership of the property.



# **Water Quality Monitoring Report**

***Schnitzer Steel Industries, Inc.  
International Terminals  
Maintenance Dredging, October 2004***

February 18, 2005

*Prepared for:*  
Schnitzer Steel Industries, Inc.

*Prepared By:*  
Parsons Brinckerhoff



SCHN00272869



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SCHN00272870





PB Ports & Marine  
Parsons Brinckerhoff Quade & Douglas, Inc.

## Transmittal

400 SW Sixth Ave., #802  
Portland, OR 97204  
503 274-8772  
503 274-1412 fax

to: Tom Melville  
Oregon Department of Environmental  
Quality  
811 SW 6th Ave.  
Portland, OR 97204  
Phone: (503) 229-5845

from: Jerald D. Ramsden

date: February 18, 2005

project: WQ Monitoring Report for  
Maintenance Dredging at International Terminals

file number 14005J2

via:

for your:

the following:

☐ mail

☐ Information/use

☐ shop drawings

☐ change order

☐ specifications

☒ messenger

☐ approval

☐ copy of letter

☐ plans

☒ others *Report*

☐ fed-ex

☐ review/comment

☐ prints

☐ samples

document

date

description

copies

rev. no.

1

2/18/05

WQ Monitoring Report

1

N/A

If enclosures are not as noted, kindly notify us at once.

comments: ..... Please find enclosed a copy of the Water Quality Monitoring Report as required under terms of the Water Quality Certification for U.S. Army Corps Project Numbers 199100099 and 199200812.

copies to: File

signature: *Jerald D. Ramsden*

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Engineering Excellence

SCHN00272871





PB Ports & Marine  
Parsons Brinckerhoff Quade & Douglas, Inc.

## Transmittal

400 SW Sixth Ave., #802  
Portland, OR 97204  
503 274-8772  
503 274-1412 fax

to: Don Borda  
U.S. Army Corps of Engineers  
PO Box 2946  
Portland, OR 97208-2946  
Phone: (503) 808-5150

from: Jerald D. Ramsden

date: February 18, 2005

project: Post-Dredging and WQ  
Monitoring Reports for Maintenance Dredging at  
International Terminals

file number 14005J2

via:

☐ mail

☒ messenger

☐ fed-ex

for your:

☐ Information/use

☐ approval

☐ review/comment

the following:

☐ shop drawings

☐ copy of letter

☐ prints

☐ change order

☐ plans

☐ samples

☐ specifications

☒ others *Reports*

document	date	description	copies	rev. no.
1	2/18/05	Post-Dredging Report	4	N/A
2	2/18/05	WQ Monitoring Report	2	N/A

If enclosures are not as noted, kindly notify us at once.

comments: ..... Please find enclosed copies of the Post-Dredging and Water Quality Monitoring Reports as required under terms of U.S. Army Corps of Engineers (USACE) permits. Each report includes dredging conducted under permits corresponding to USACE Project Numbers 199100099 and 199200812.

copies to: File

signature: *Jerald D. Ramsden*

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Engineering Excellence

SCHN00272872





PB Ports & Marine  
Parsons Brinckerhoff Quade & Douglas, Inc.

## Transmittal

400 SW Sixth Ave., #802  
Portland, OR 97204  
503 274-8772  
503 274-1412 fax

to: Jim Jakubiak  
Schnitzer Steel Industries, Inc.  
3200 NW Yeon Ave.  
Portland, OR 97210

Phone: (503)224-9900

from: Jerald D. Ramsden

date: February 18, 2005

project: IT Dredging

file number 14005J2 Task 4

via:

☒ mail

☐ messenger

☐ fed-ex

for your:

☐ Information/use

☐ approval

☐ review/comment

the following:

☐ shop drawings

☐ copy of letter

☐ prints

☐ change order

☐ plans

☐ samples

☐ specifications

☒ others\_

document	date	description	copies	rev. no.
1	2/18/05	WQ Monitoring Report: Final	6	N/A
2	2/18/05	Transmittal Sheet: Don Borda, USACE	1	N/A
3	2/18/05	Transmittal Sheet: Tom Melville, ODEQ	1	N/A

If enclosures are not as noted, kindly notify us at once.

comments: .....As requested please find enclosed the WQ report and transmittal sheet for the USACE and ODEQ.

copies to: File

signature: 

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Engineering Excellence

SCHN00272873



## INTRODUCTION

Navigation maintenance dredging was conducted at the Schnitzer Steel Industries, Inc. (SSI) International Terminals facility on the Willamette River between October 12 and 29, 2004. The project site is located on the east bank of the river between River Mile 3.6 and 4.1. The dredging is authorized under Federal Section 10/404 permits, a Section 401 Water quality certification and State Removal-Fill permits. Dredging was conducted in the entrance channel, Berth 3, and Berth 4 as shown in Figures 1 and 2. As part of the permit conditions, SSI was required to monitor water quality during dredging and provide this water quality monitoring report.

### Basic project information:

Applicant Name: Schnitzer Steel Industries, Inc.

Permit Numbers: USACE 199100099 and USACE 199200812

Project Name: International Terminals Maintenance Dredging

Type of Activity: Maintenance Dredging

Project Location: Vicinity Map included in Figure 1; Latitude 45 deg. 36 min. 41 sec. N; Longitude 122 deg. 46 min. 42 sec W; there are no compensatory mitigation sites for these projects

Corps contact person: Mr. Don Borda

Starting and ending dates for in-water work completed:  
Beginning October 12, 2004; ending October 29, 2004

Volume of Dredged Material:  
Entrance of Slip 6,004 cy; Berth 3 3,041 cy; and Berth 4 1,828 cy  
(Total volume dredged 10,873 cy).

## WATER QUALITY MONITORING METHODS AND RESULTS

### Methods

Water quality was monitored using a turbidity meter and visually in accordance with the Water Quality Monitoring Plan (Appendix of the Oregon Department of Environmental Quality Water Quality Certification).

In-situ monitoring was conducted by Parsons Brinckerhoff personnel using a turbidity meter manufactured by Hydrolab (Model: Quanta). The Quanta system included a turbidity sensor and depth sensor. The turbidity sensor was calibrated according to the manufacturer's standards each day before conducting in-situ monitoring. A calibration standard (Hatch Turbidity Standard # 013720HY, 100 NTU) and distilled water were used to calibrate the instrument per manufacturer's guidance.



Water quality monitoring was conducted from a skiff utilizing a single point anchorage to establish approximate positions. Confirmation of locations for ambient conditions and compliance monitoring locations were verified using a DGPS positioning system manufactured by Trimble (Model: Pathfinder Pro XR and TSC1 data logger). Turbidity measurements were collected within one meter of the water surface, mid-depth and approximately one meter above the mudline in accordance with the Water Quality Monitoring Plan. These three turbidity measurements were averaged and reported in Table 1.

## Results

Results from the in-situ monitoring and the visual monitoring are provided in Table 1. To summarize, all the in-situ monitoring results were well below both the action level (35 NTU) and the stop work level (135 NTU). The maximum measured turbidity, 22 NTU, was recorded about 0.8 meters above the mudline at the compliance boundary on Wednesday, October 13.

On October 12, 2004 during in-situ monitoring the current (determined from the drag on the turbidity meter) was slight and from NW to SE. Therefore, the compliance monitoring position was taken on the south side of the dredging activity to intercept potential turbidity generated from dredging and barge dewatering. Ambient conditions were monitored both north and south of the dredging activity. Two compliance measurements were collected. The maximum observed vertically averaged turbidity was 10 NTU at the compliance boundary. Results indicated turbidity well below the action level (35 NTU) specified in the Water Quality Monitoring Plan. Mr. Ramsden was on board the boat. The weather was sunny and warm with a NW breeze.

On Wednesday October 13, 2004 one compliance measurement was obtained due to drift observed in the turbidity monitoring equipment. The maximum vertically averaged turbidity at the compliance boundary was 19 NTU. New equipment was ordered from the vendor and arrived on Friday morning, October 15. On Wednesday, October 13 Mr. Ramsden and Mr. Krcma were on board the boat. The weather was clear and warm with a NW breeze.

On Friday October 15, 2004 the replacement equipment arrived. The replacement equipment was the same make and model as the previous equipment except there was no depth sensor. To monitor depth the cable on the instrument was marked every 5 feet. On Friday, four measurements were collected for ambient conditions and at the compliance boundary. The maximum vertically averaged turbidity at the compliance boundary was 13 NTU. Mr. Krcma and Mr. Aggarwal were on board the boat. The weather was clear and warm with a NW breeze.

During all field activity associated with the inwater work, the turbidity of the river was observed to establish a qualitative reference for visual observations to be conducted after completion of the in-situ monitoring.

## CONCLUSION

All in-situ turbidity measurements were well under the action level of 35 NTU. In addition, all visual monitoring results revealed similar water clarity between the ambient and compliance



boundary locations. Therefore, we conclude water quality standards were met during maintenance dredging at International Terminals in October, 2004.



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Table 1. Water Quality Monitoring Results.

Date	Time	River Stage (feet) CRD	Total Depth (feet)	Description	Northing feet (NAD 83)	Easting feet (NAD 83)	Depth Averaged Turbidity (NTU)	Dredge Location	Comments
10/12/04	3:35 pm	2.3	19.7	Ambient	717,507	7,617,643	8.4	Entrance	In-situ
10/12/04	4:15 pm	3.0	43.3	Compliance	716,975	7,617,731	10.3	Entrance	"
10/12/04	4:45 pm	3.9	24.6	Compliance	717,014	7,617,852	9.6	Entrance	"
10/13/04	2:47 pm	1.4	41.3	Ambient	716,920	7,617,683	18.2	Entrance	"
10/13/04	3:05 pm	1.6	34.1	Compliance	717,455	7,617,586	19.1	Entrance	"
10/13/04	3:18pm	1.8	32.8	Compliance -duplicate	717,459	7,617,598	17.6	Entrance	"
10/14/04	12:15 pm	1.5	-	-	-	-	-	Entrance	Visual: similar clarity between ambient location and compliance boundary
10/14/04	2:40 pm	1.1	-	-	-	-	-	Entrance	"
10/14/04	4:00 pm	2.2	-	-	-	-	-	Entrance	"
10/15/04	11:59 am	2.3	40.0	Ambient	716,888	7,617,770	8.4	Entrance	In-situ
10/15/04	12:20 pm	2.1	27.9	Compliance	717,476	7,617,617	12.5	Entrance	"
10/15/04	1:05 pm	1.9	36.1	Ambient	716,873	7,617,798	9.2	Entrance	In-situ

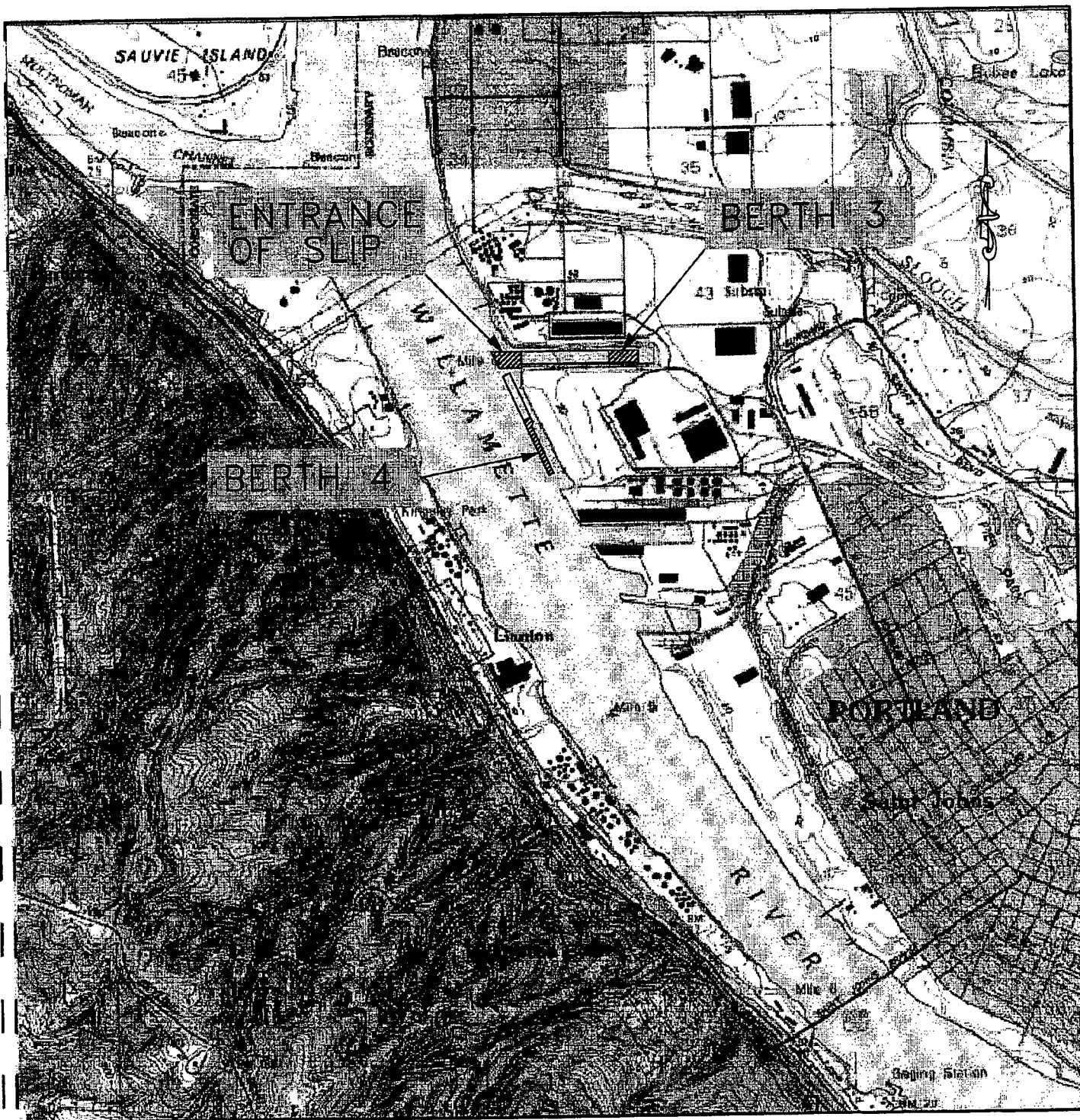


10/15/04	1:17 pm	1.8	40.0	Compliance	717,442	7,617,578	10.1	Entrance	"
10/15/04	3:08 pm	1.7	43.0	Compliance	717,408	7,617,598	9.2	Entrance	"
10/15/04	3:22 pm	2.4	32.1	Ambient	716,846	7,617,841	9.7	Entrance	"
10/15/04	4:32 pm	2.9	38.4	Compliance	717,427	7,617,617	9.6	Entrance	"
10/15/04	4:45 pm	3.5	39.0	Ambient	716,862	7,617,800	9.5	Entrance	"
10/16/04	9:10 am	4.1	-	-	-	-	-	Entrance	Visual: similar clarity between ambient location and compliance boundary
10/16/04	9:45 am	3.9	-	-	-	-	-	Entrance	"
10/16/04	1:43 pm	2.3	-	-	-	-	-	Entrance	"
10/17/04									No dredging
10/18/04	2:10 pm	2.8	-	-	-	-	-	Berth 3	Visual: similar clarity between ambient location and compliance boundary
10/18/04	3:30 pm	2.6	-	-	-	-	-	Berth 3	"
10/19/04	7:45 am	2.5	-	-	-	-	-	Berth 3	"
10/19/04	2:00 pm	3.1	-	-	-	-	-	Berth 3	"
10/20/04	9:00 am	3.4	-	-	-	-	-	Berth 3	Visual: similar clarity between ambient location and



									compliance boundary
10/21/04	8:45 am	3.1	-	-	-	-	-	Berth 4	"
10/21/04	12:00 pm	3.8	-	-	-	-	-	Berth 4	"
10/22/04									No dredging
10/23/04									No dredging
10/24/04									No dredging
10/25/04									No dredging
10/26/04									No dredging
10/27/04									No dredging
10/28/04	10:00 am	4.0	-	-	-	-	-	Berth 4	Visual: similar clarity between ambient location and compliance boundary
10/28/04	11:25 am	3.5	-	-	-	-	-	Berth 4	"
10/28/04	2:10 pm	2.9	-	-	-	-	-	Berth 4	"
10/29/04	9:00 am	4.1	-	-	-	-	-	Berth 4	"





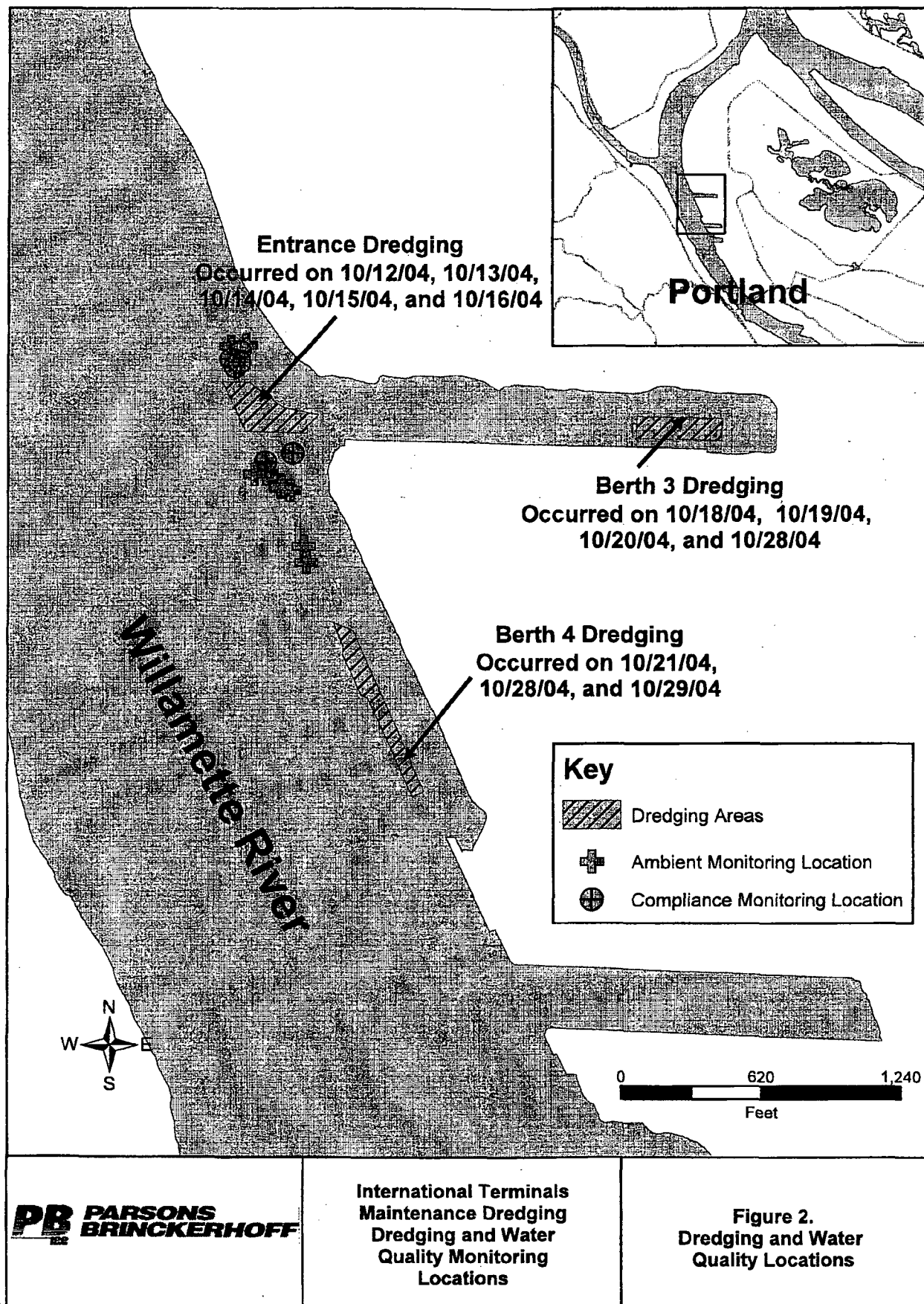
Scale in Feet  
0 1000 2000

Figure 1  
Vicinity Map

**PD PARSONS  
BRINCKERHOFF**  
400 S.W. Sixth Ave, Portland, OR 97204

SCHN00272881





SCHN00272882



# **Post-Dredging Report**

***Schnitzer Steel Industries, Inc.  
International Terminals  
Maintenance Dredging, October 2004***

February 11, 2005

*Prepared for:*  
Schnitzer Steel Industries, Inc.

*Prepared By:*  
Parsons Brinckerhoff



SCHN00272883



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## INTRODUCTION

Navigation maintenance dredging was conducted at the Schnitzer Steel Industries, Inc. (SSI) International Terminals facility on the Willamette River between October 12 and 29, 2004. The project site is located on the east bank of the river between river mile 3.6 and 4.1. The dredging is authorized under Federal Section 10/404 permits, a Section 401 Water quality certification and State Removal-Fill permits. Dredging was conducted in the entrance channel, Berth 3 and Berth 4 as shown in Figures 1 through 3.

As part of the federal permit conditions, SSI is required to provide this post-dredging report. Permit conditions require the following information be documented:

1. National Oceanographic and Atmospheric Administration (NOAA) Fisheries requires the U.S. Army Corps of Engineers to ensure each applicant submits a monitoring report to the Corps within 120 days of project completion.
2. The U.S. Fish & Wildlife Service required any incidences when the close-lipped bucket is not used (breakdowns, etc.) will be provided in a post-dredging report to the Service describing when, where, and the length of time the close-lipped dredge was out of service.

## MAINTENANCE DREDGING AND DISPOSAL OPERATIONS

### Information required by NOAA Fisheries

Applicant Name: Schnitzer Steel Industries, Inc.

Permit Numbers: USACE 199100099 and USACE 199200812

Project Name: International Terminals Maintenance Dredging

Type of Activity: Maintenance Dredging

Project Location: Vicinity Map included in Figure 1; Latitude 45 deg. 36 min. 41 sec. N; Longitude 122 deg. 46 min. 42 sec W; there are no compensatory mitigation sites for these projects

Corps contact person: Mr. Don Borda

Starting and ending dates for work completed:  
Beginning October 12, 2004; ending October 29, 2004

Volume of Dredged Material:  
Entrance of Slip 6,004 cy; Berth 3 3,041 cy; and Berth 4 1,828 cy  
(Total volume dredged 10,873 cy).



Water depth before dredging and within one week of completion:

Minister & Glaeser Surveying, Inc. performed the pre-dredge and post-dredge surveys as shown in Figures 2 and 3, respectively. All post-dredge surveys were conducted within one week of completion of dredging at the respective locations. Based on a review of the pre-dredge and post-dredge surveys, it is concluded the limits of dredging are in compliance with the permits.

#### **VERIFICATION OF UPLAND DREDGE DISPOSAL**

All dredged material was transported by barge to The Dalles, Oregon, offloaded at the Bernert Barge lines dock to truck and disposed to the Wasco County Landfill. Appendix A shows a summary of all disposal operations including tonnage per truck load. An example of the scale receipts is shown in Appendix B. The remainder of the scale receipts are on file.

Site inspections of the offload area were conducted during and after operations on October 15, October 26, November 2 and December 3, 2004.

During the last site visit on December 3, 2004 it was confirmed that all Hickey Marine equipment had been removed from the site. The roads and work areas were clean and free of sediment. The river water quality at the time of the site visit appeared normal. A barge was moored at the dock and the facility appeared to be normal operations.

#### **Information required by the U.S. Fish & Wildlife Service**

Hickey Marine's dredge operation employed a cable arm clamshell bucket; however, due to the high percentage of sand encountered during dredging at the entrance area of the slip, Hickey Marine needed to employ as ESCO 8 cy clamshell digging bucket in order to penetrate the sandy material encountered. Use of the digging bucket occurred on October 12 (9:00 am to 7:00 pm), October 13 (7:30 am to 3:50 pm), October 14 (8:15 am to 5:30 pm), October 15 (9:40 am to 5:15 pm) and October 16 (6:40 am to 2:00 pm).

All other dredging at Berth's 3 and 4 through the remainder of October encountered softer material, and a close-tipped cable arm clamshell bucket was used.

#### **Additional information**

As required in the permit conditions:

1. Sediment dewatering was only conducted within the dredge area.
2. No water or dredge material from the barges was allowed to enter the water during transport and offload operations.

#### **SUMMARY**

All dredging and disposal operations were conducted in accordance with permit conditions.



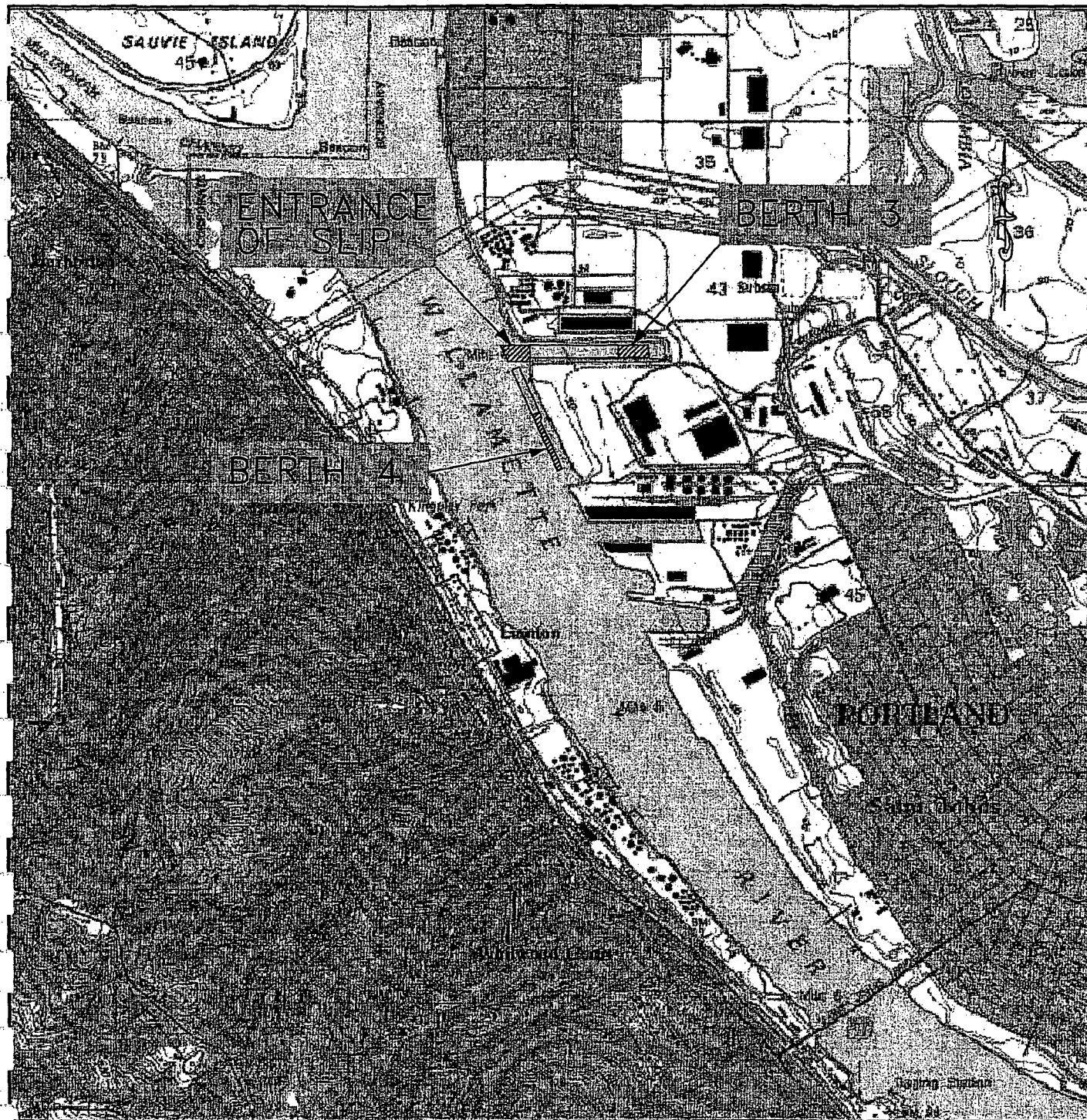
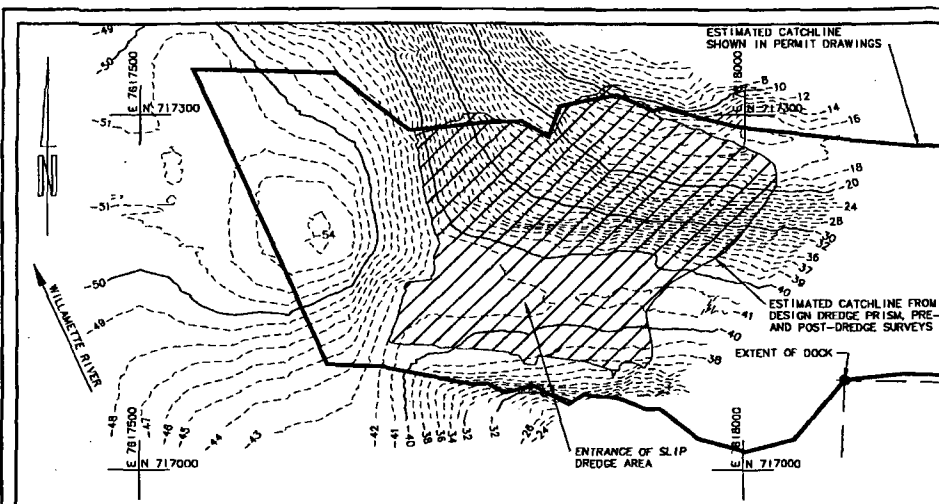


Figure 1  
Vicinity Map

**PB PARSONS  
BRINCKERHOFF**  
400 S.W. Sixth Ave., Portland, OR 97204

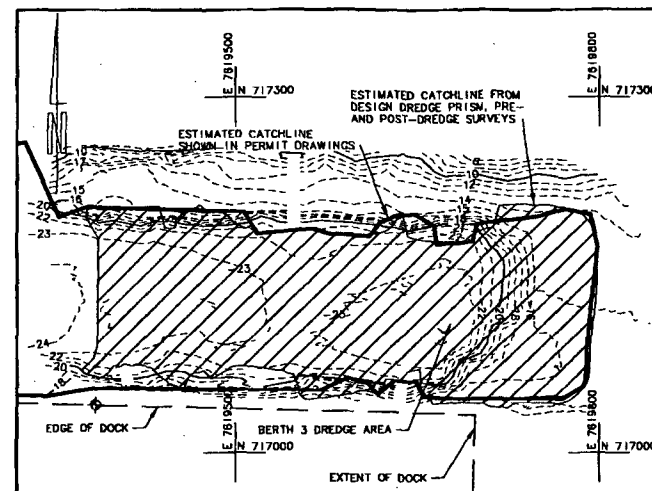
SCHN00272887





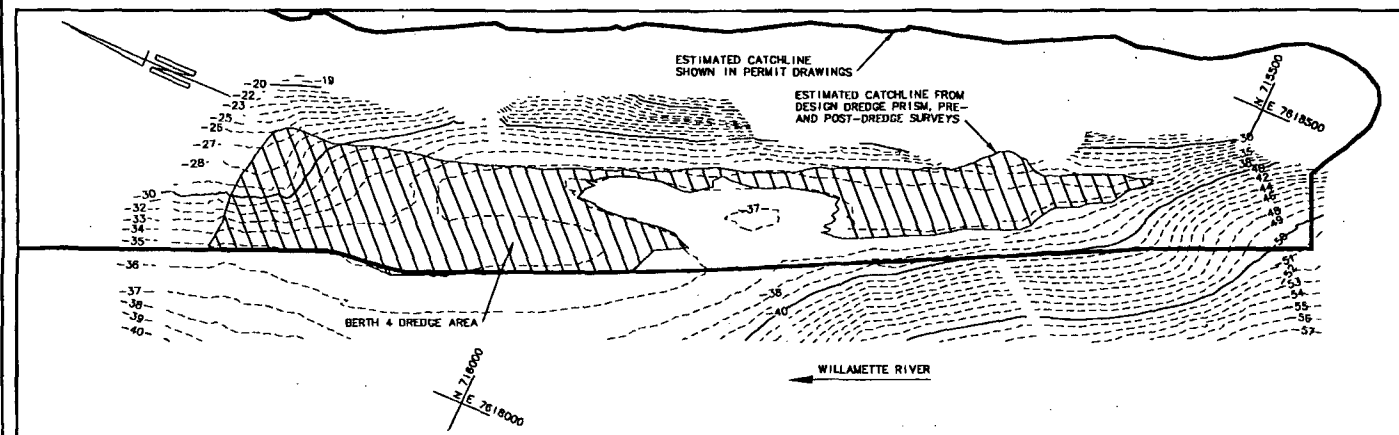
ENTRANCE OF SLIP (R.M. 3.4)

SCALE IN FEET  
0 25 50 75 100



BERTH 3 (R.M. 3.4)

SCALE IN FEET  
0 25 50 75 100



BERTH 4 (R.M. 3.9)

SCALE IN FEET  
0 25 50 75 100

Figure 2  
Pre-Dredge Surveys

# SCHNITZER STEEL INDUSTRIES

PRE-DREDGE  
HYDROGRAPHIC SURVEY  
WILLAMETTE RIVER  
OCTOBER 8, 2004

JOB NO.: 04-150  
DATA COLLECT: OCTOBER 8, 2004  
DRAWING DATE: OCTOBER 13, 2004

ESTIMATED CATCHLINE SHOWN IN PERMIT  
DRAWINGS PROVIDED BY PARSONS BRINCKERHOFF  
PER ARMY CORPS OF ENGINEERS PERMIT NO.'S  
199100099 AND 199200817.  
ESTIMATED CATCHLINE FROM DESIGN DREDGE  
PRISM, PRE- AND POST-DREDGE SURVEYS  
PROVIDED BY PARSONS BRINCKERHOFF.

## NOTES:

1. HORIZONTAL DATUM: OREGON STATE PLANE COORDINATE SYSTEM, NORTH ZONE (NAD-83), INTERNATIONAL FEET.
2. CONTOURS ARE SHOWN IN FEET AT AN INTERVAL OF 1 FOOT AND INDICATE ELEVATIONS IN REFERENCE TO COLUMBIA RIVER DATUM (C.R.D.), BASED ON THE UTRE BOARD LOCATED AT PORT OF PORTLAND BERTH-111.
3. HORIZONTAL POSITIONS FOR NAVIGATION AND DATA COLLECTION WERE DETERMINED BY USING A TRIMBLE 4700 G.P.S. SYSTEM OPERATING IN DIFFERENTIAL MODE, USING THE G.P.S. CONTINUOUSLY OPERATING REFERENCE STATION (CORS).
4. BATHYMETRIC DATA WAS COLLECTED USING Kongsberg 330M ECHOSOUNDER WITH A 6 DEGREE SINGLE BEAM TRANSDUCER, OPERATING AT 200 MHz.
5. SURVEY DATA WAS COLLECTED PERPENDICULAR TO THE DESIGNED SLOPE USING A TWENTY-FIVE FOOT LINE SPACING. THE SURVEY DATA COLLECTED ALONG EACH SURVEY LINE WAS THINNED USING A "SHOAL BIAS" METHOD TO AN APPROXIMATE HORIZONTAL SPACING OF 3 FEET.
6. THERE MAY BE BOTTOM FEATURES THAT ARE NOT SHOWN ON THIS MAP DUE TO THE LINE SPACING INTERVAL. THIS SURVEY DOES NOT INCLUDE BATHYMETRIC DATA BETWEEN THE ADJACENT SURVEY LINES.
7. THIS BATHYMETRIC SURVEY IS REPRESENTATIVE OF THE CONDITION OF THE BOTTOM AT THE TIME OF THE SURVEY, BASED ON THE LINE SPACING INTERVAL AND THINNING METHOD USED. THE CONDITION OF THE BOTTOM MAY CHANGE AT ANY TIME AFTER THE DATE OF THIS SURVEY.
8. BATHYMETRIC DATA WAS COLLECTED IN ACCORDANCE WITH THE U.S. ARMY CORPS OF ENGINEERS HYDROGRAPHIC MANUAL CH-1112-02-1003 (JANUARY 2002), FOR NAVIGATION AND DREDGING SUPPORT SURVEYS WITH THE BOTTOM CLASSIFICATION OF SOFT.
9. DATA COLLECTED: OCTOBER 8, 2004.

REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

OREGON  
JULY 11, 2000  
GREGORY P. LAIRD  
244715  
Expires 12-31-2005

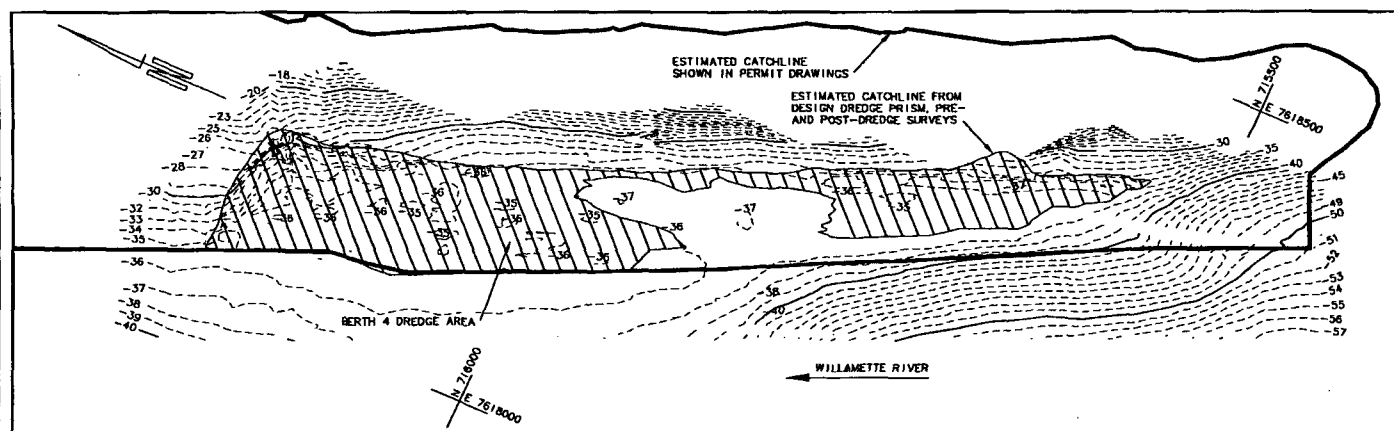
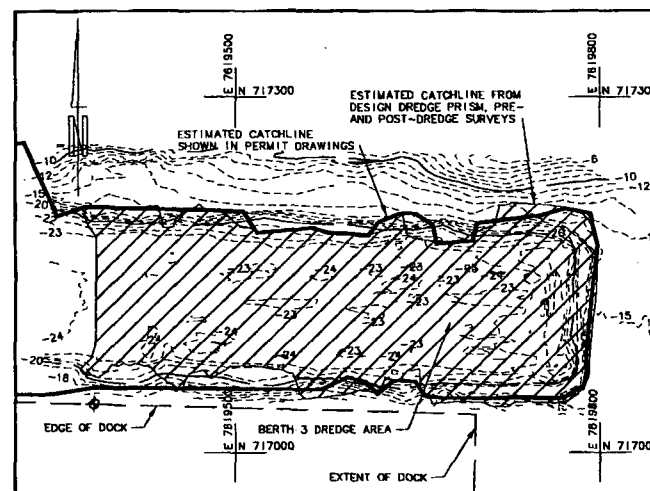
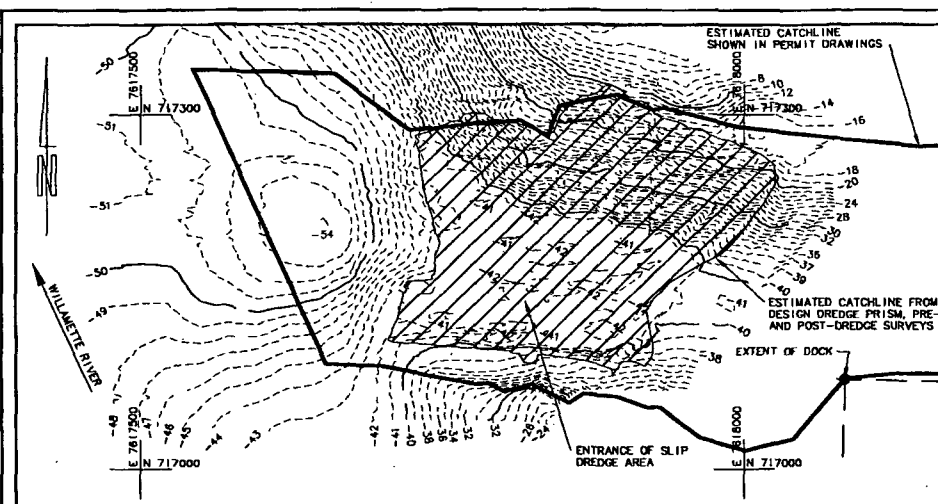


MINISTER-GLAESER  
SURVEYING INC.  
2200 E EVERGREEN BLVD.  
VANCOUVER, WA 98601  
(360) 694-3313

AMERICAN CONGRESS ON SURVEYING AND MAPPING  
HYDROGRAPHER CERTIFICATION #201  
MARCH 24, 1999



**SCHNITZER STEEL INDUSTRIES**  
**POST-DREDGE**  
**HYDROGRAPHIC SURVEY**  
**WILLAMETTE RIVER**  
**OCTOBER 29, 2004**  
 JOB NO.: 04-450  
 DATA COLLECT: OCTOBER 18, 2004  
 OCTOBER 29, 2004  
 DRAWING DATE: NOVEMBER 1, 2004



ESTIMATED CATCHLINE SHOWN IN PERMIT DRAWINGS PROVIDED BY PARSONS BRINCKERHOFF PER ARMY CORPS OF ENGINEERS PERMIT NO.'S 199100099 AND 199200817. ESTIMATED CATCHLINE FROM DESIGN DREDGE PRISM, PRE- AND POST-DREDGE SURVEYS PROVIDED BY PARSONS BRINCKERHOFF.

**NOTES:**

1. HORIZONTAL DATUM: OREGON STATE PLANE COORDINATE SYSTEM, NORTH ZONE (NAD-83), INTERNATIONAL FEET.
2. CONTOURS ARE SHOWN IN FEET AT AN INTERVAL OF 1 FOOT AND INDICATE ELEVATIONS IN REFERENCE TO COLUMBIA RIVER DATUM (C.R.D.), BASED ON THE UTIDE BOARD LOCATED AT PORT OF PORTLAND BERTH-411.
3. HORIZONTAL POSITIONS FOR NAVIGATION AND DATA COLLECTION WERE DETERMINED BY USING A TRIMBLE 4700 G.P.S. SYSTEM OPERATING IN DIFFERENTIAL MODE, USING THE G.P.S. CONTINUOUSLY OPERATING REFERENCE STATION (CORS).
4. BATHYMETRIC DATA WAS COLLECTED USING KONGSDEN 300M ECHOSOUNDER WITH A 0 DEGREE SINGLE BEAM TRANSDUCER, OPERATING AT 200 kHz.
5. SURVEY DATA WAS COLLECTED PERPENDICULAR TO THE DESIGNED SLOPE USING A TWENTY-FIVE FOOT LINE SPACING. THE SURVEY DATA COLLECTED ALONG EACH SURVEY LINE WAS THINNED USING A "SHOAL BLAST" METHOD TO AN APPROXIMATE HORIZONTAL SPACING OF 3 FEET.
6. THERE MAY BE BOTTOM FEATURES THAT ARE NOT SHOWN ON THIS MAP DUE TO THE LINE SPACING INTERVAL. THIS SURVEY DOES NOT INCLUDE BATHYMETRIC DATA BETWEEN THE ADJACENT SURVEY LINES.
7. THIS BATHYMETRIC SURVEY IS REPRESENTATIVE OF THE CONDITION OF THE BOTTOM AT THE TIME OF THE SURVEY, BASED ON THE LINE SPACING INTERVAL AND THINNING METHOD USED. THE CONDITION OF THE BOTTOM MAY CHANGE AT ANY TIME AFTER THE DATE OF THIS SURVEY.
8. BATHYMETRIC DATA WAS COLLECTED IN ACCORDANCE WITH THE U.S. ARMY CORPS OF ENGINEERS HYDROGRAPHIC MANUAL, EM-1112-02-1003 (JANUARY 2002), FOR NAVIGATION AND DREDGING SUPPORT SURVEYS WITH THE BOTTOM CLASSIFICATION OF SOFT.

**Figure 3**  
**Post-Dredge Surveys**

AMERICAN CONGRESS ON SURVEYING AND MAPPING  
 HYDROGRAPHER CERTIFICATION #201  
 MARCH 24, 1999

REGISTERED  
 PROFESSIONAL  
 LAND SURVEYOR

OREGON  
 JAY L. YARD  
 GREGORY P. BARD  
 4547115

Expires 12-31-2005



**MINISTER-CLAESER**  
**SURVEYING INC.**  
 2200 E. EVERGREEN BLVD.  
 VANCOUVER, WA 98661  
 (360) 694-3313

SCHN00272889



## Appendix A. Summary of Dredge Material Disposal Scale Receipts

Schnitzer Steel Summary		Ticket #	Tons
10/14/2004	TRUCKING - PER TON	40281	33.53
10/14/2004	MANAGEMENT FEE	40281	33.53
10/14/2004	TRUCKING - PER TON	40282	32.99
10/14/2004	MANAGEMENT FEE	40282	32.99
10/14/2004	TRUCKING - PER TON	40283	33.48
10/14/2004	MANAGEMENT FEE	40283	33.48
10/14/2004	TRUCKING - PER TON	40284	30.95
10/14/2004	MANAGEMENT FEE	40284	30.95
10/14/2004	TRUCKING - PER TON	40285	34.45
10/14/2004	MANAGEMENT FEE	40285	34.45
10/14/2004	TRUCKING - PER TON	40286	28.98
10/14/2004	MANAGEMENT FEE	40286	28.98
10/14/2004	TRUCKING - PER TON	40294	35.87
10/14/2004	MANAGEMENT FEE	40294	35.87
10/14/2004	TRUCKING - PER TON	40296	38.29
10/14/2004	MANAGEMENT FEE	40296	38.29
10/14/2004	TRUCKING - PER TON	40297	33.01
10/14/2004	MANAGEMENT FEE	40297	33.01
10/14/2004	TRUCKING - PER TON	40305	34.01
10/14/2004	MANAGEMENT FEE	40305	34.01
10/14/2004	TRUCKING - PER TON	40309	24.40
10/14/2004	MANAGEMENT FEE	40309	24.40
10/14/2004	TRUCKING - PER TON	40310	33.10
10/14/2004	MANAGEMENT FEE	40310	33.10
10/14/2004	TRUCKING - PER TON	40318	34.46
10/14/2004	MANAGEMENT FEE	40318	34.46
10/14/2004	TRUCKING - PER TON	40319	33.32
10/14/2004	MANAGEMENT FEE	40319	33.32
10/14/2004	TRUCKING - PER TON	40323	32.13
10/14/2004	MANAGEMENT FEE	40323	32.13
10/14/2004	TRUCKING - PER TON	40325	33.88
10/14/2004	MANAGEMENT FEE	40325	33.88
10/14/2004	TRUCKING - PER TON	40331	33.65
10/14/2004	MANAGEMENT FEE	40331	33.65
10/14/2004	TRUCKING - PER TON	40332	32.97
10/14/2004	MANAGEMENT FEE	40332	32.97
10/14/2004	TRUCKING - PER TON	40334	31.86
10/14/2004	MANAGEMENT FEE	40334	31.86
10/14/2004	TRUCKING - PER TON	40337	36.03
10/14/2004	MANAGEMENT FEE	40337	36.03
10/15/2004	TRUCKING - PER TON	40361	32.70
10/15/2004	MANAGEMENT FEE	40361	32.70
10/15/2004	TRUCKING - PER TON	40362	33.08
10/15/2004	MANAGEMENT FEE	40362	33.08
10/15/2004	TRUCKING - PER TON	40363	34.13
10/15/2004	MANAGEMENT FEE	40363	34.13
10/15/2004	TRUCKING - PER TON	40364	34.13
10/15/2004	MANAGEMENT FEE	40364	34.13
10/15/2004	TRUCKING - PER TON	40365	33.09
10/15/2004	MANAGEMENT FEE	40365	33.09
10/15/2004	TRUCKING - PER TON	40366	33.47
10/15/2004	MANAGEMENT FEE	40366	33.47
10/15/2004	TRUCKING - PER TON	40386	35.59
10/15/2004	MANAGEMENT FEE	40386	35.59
10/15/2004	TRUCKING - PER TON	40387	35.98
10/15/2004	MANAGEMENT FEE	40387	35.98
10/15/2004	TRUCKING - PER TON	40388	35.22
10/15/2004	MANAGEMENT FEE	40388	35.22
10/15/2004	TRUCKING - PER TON	40390	35.04



## Appendix A. Continued

10/15/2004	MANAGEMENT FEE	40390	35.04
10/15/2004	TRUCKING - PER TON	40391	38.20
10/15/2004	MANAGEMENT FEE	40391	38.20
10/15/2004	TRUCKING - PER TON	40414	34.26
10/15/2004	MANAGEMENT FEE	40414	34.26
10/15/2004	TRUCKING - PER TON	40415	33.68
10/15/2004	MANAGEMENT FEE	40415	33.68
10/15/2004	TRUCKING - PER TON	40416	32.92
10/15/2004	MANAGEMENT FEE	40416	32.92
10/15/2004	TRUCKING - PER TON	40417	32.08
10/15/2004	MANAGEMENT FEE	40417	32.08
10/15/2004	TRUCKING - PER TON	40419	32.93
10/15/2004	MANAGEMENT FEE	40419	32.93
10/15/2004	TRUCKING - PER TON	40420	36.73
10/15/2004	MANAGEMENT FEE	40420	36.73
10/15/2004	TRUCKING - PER TON	40421	34.30
10/15/2004	MANAGEMENT FEE	40421	34.30
10/15/2004	TRUCKING - PER TON	40437	34.32
10/15/2004	MANAGEMENT FEE	40437	34.32
10/15/2004	TRUCKING - PER TON	40438	32.84
10/15/2004	MANAGEMENT FEE	40438	32.84
10/15/2004	TRUCKING - PER TON	40439	32.26
10/15/2004	MANAGEMENT FEE	40439	32.26
10/15/2004	TRUCKING - PER TON	40440	32.03
10/15/2004	MANAGEMENT FEE	40440	32.03
10/15/2004	TRUCKING - PER TON	40447	31.57
10/15/2004	MANAGEMENT FEE	40447	31.57
10/15/2004	TRUCKING - PER TON	40448	33.65
10/15/2004	MANAGEMENT FEE	40448	33.65
10/15/2004	TRUCKING - PER TON	40449	31.91
10/15/2004	MANAGEMENT FEE	40449	31.91
10/15/2004	TRUCKING - PER TON	40450	32.43
10/15/2004	MANAGEMENT FEE	40450	32.43
10/15/2004	MANAGEMENT FEE	40454	32.48
10/15/2004	TRUCKING - PER TON	40454	32.48
10/15/2004	TRUCKING - PER TON	40457	32.25
10/15/2004	MANAGEMENT FEE	40457	32.25
10/15/2004	MANAGEMENT FEE	40458	32.46
10/15/2004	TRUCKING - PER TON	40458	32.46
10/15/2004	TRUCKING - PER TON	40459	32.01
10/15/2004	MANAGEMENT FEE	40459	32.01
10/15/2004	MANAGEMENT FEE	40460	34.20
10/15/2004	TRUCKING - PER TON	40460	34.20
10/15/2004	MANAGEMENT FEE	40462	32.20
10/15/2004	TRUCKING - PER TON	40462	32.20
10/16/2004	TRUCKING - PER TON	40472	31.23
10/16/2004	MANAGEMENT FEE	40472	31.23
10/16/2004	TRUCKING - PER TON	40473	33.45
10/16/2004	MANAGEMENT FEE	40473	33.45
10/16/2004	TRUCKING - PER TON	40474	32.05
10/16/2004	MANAGEMENT FEE	40474	32.05
10/16/2004	TRUCKING - PER TON	40475	31.97
10/16/2004	MANAGEMENT FEE	40475	31.97
10/16/2004	TRUCKING - PER TON	40476	33.42
10/16/2004	MANAGEMENT FEE	40476	33.42
10/16/2004	TRUCKING - PER TON	40478	33.42
10/16/2004	MANAGEMENT FEE	40478	33.42
10/16/2004	MANAGEMENT FEE	40482	31.00
10/16/2004	TRUCKING - PER TON	40482	31.00
10/16/2004	MANAGEMENT FEE	40483	32.25
10/16/2004	TRUCKING - PER TON	40483	32.25



## Appendix A. Continued

10/16/2004	TRUCKING - PER TON	40484	33.61
10/16/2004	MANAGEMENT FEE	40484	33.61
10/16/2004	MANAGEMENT FEE	40502	31.83
10/16/2004	TRUCKING - PER TON	40502	31.83
10/16/2004	MANAGEMENT FEE	40503	32.48
10/16/2004	TRUCKING - PER TON	40503	32.48
10/16/2004	TRUCKING - PER TON	40504	33.12
10/16/2004	MANAGEMENT FEE	40504	33.12
10/16/2004	TRUCKING - PER TON	40505	32.08
10/16/2004	MANAGEMENT FEE	40505	32.08
10/16/2004	MANAGEMENT FEE	40506	31.60
10/16/2004	TRUCKING - PER TON	40506	31.60
10/16/2004	TRUCKING - PER TON	40509	32.07
10/16/2004	MANAGEMENT FEE	40509	32.07
10/16/2004	TRUCKING - PER TON	40510	33.22
10/16/2004	MANAGEMENT FEE	40510	33.22
10/16/2004	TRUCKING - PER TON	40511	31.59
10/16/2004	MANAGEMENT FEE	40511	31.59
10/16/2004	TRUCKING - PER TON	40516	23.62
10/16/2004	MANAGEMENT FEE	40516	23.62
10/18/2004	TRUCKING - PER TON	40550	33.82
10/18/2004	MANAGEMENT FEE	40550	33.82
10/18/2004	TRUCKING - PER TON	40558	20.70
10/18/2004	MANAGEMENT FEE	40558	20.70
10/18/2004	MANAGEMENT FEE	40560	37.65
10/18/2004	TRUCKING - PER TON	40560	37.65
10/18/2004	MANAGEMENT FEE	40561	32.84
10/18/2004	TRUCKING - PER TON	40561	32.84
10/18/2004	TRUCKING - PER TON	40562	32.40
10/18/2004	MANAGEMENT FEE	40562	32.40
10/18/2004	MANAGEMENT FEE	40583	33.23
10/18/2004	TRUCKING - PER TON	40583	33.23
10/18/2004	MANAGEMENT FEE	40585	24.93
10/18/2004	TRUCKING - PER TON	40585	24.93
10/18/2004	MANAGEMENT FEE	40586	32.12
10/18/2004	TRUCKING - PER TON	40586	32.12
10/18/2004	MANAGEMENT FEE	40595	34.30
10/18/2004	TRUCKING - PER TON	40595	34.30
10/18/2004	MANAGEMENT FEE	40598	34.01
10/18/2004	TRUCKING - PER TON	40598	34.01
10/18/2004	MANAGEMENT FEE	40599	32.78
10/18/2004	TRUCKING - PER TON	40599	32.78
10/18/2004	MANAGEMENT FEE	40601	26.93
10/18/2004	TRUCKING - PER TON	40601	26.93
10/18/2004	MANAGEMENT FEE	40607	34.76
10/18/2004	TRUCKING - PER TON	40607	34.76
10/18/2004	MANAGEMENT FEE	40616	34.07
10/18/2004	TRUCKING - PER TON	40616	34.07
10/18/2004	MANAGEMENT FEE	40619	32.84
10/18/2004	TRUCKING - PER TON	40619	32.84
10/18/2004	MANAGEMENT FEE	40629	34.37
10/18/2004	TRUCKING - PER TON	40629	34.37
10/18/2004	MANAGEMENT FEE	40631	32.97
10/18/2004	TRUCKING - PER TON	40631	32.97
10/18/2004	MANAGEMENT FEE	40632	36.31
10/18/2004	TRUCKING - PER TON	40632	36.31
10/18/2004	MANAGEMENT FEE	40639	34.45
10/18/2004	TRUCKING - PER TON	40639	34.45
10/18/2004	MANAGEMENT FEE	40641	34.84
10/18/2004	TRUCKING - PER TON	40641	34.84
10/18/2004	MANAGEMENT FEE	40642	36.24



## Appendix A. Continued

10/18/2004	TRUCKING - PER TON	40642	36.24
10/19/2004	MANAGEMENT FEE	40652	32.88
10/19/2004	TRUCKING - PER TON	40652	32.88
10/19/2004	MANAGEMENT FEE	40657	35.44
10/19/2004	TRUCKING - PER TON	40657	35.44
10/19/2004	MANAGEMENT FEE	40658	35.65
10/19/2004	TRUCKING - PER TON	40658	35.65
10/19/2004	MANAGEMENT FEE	40659	31.10
10/19/2004	TRUCKING - PER TON	40659	31.10
10/19/2004	MANAGEMENT FEE	40667	34.92
10/19/2004	TRUCKING - PER TON	40667	34.92
10/19/2004	MANAGEMENT FEE	40668	32.50
10/19/2004	TRUCKING - PER TON	40668	32.50
10/19/2004	MANAGEMENT FEE	40669	39.87
10/19/2004	TRUCKING - PER TON	40669	39.87
10/19/2004	MANAGEMENT FEE	40675	32.13
10/19/2004	TRUCKING - PER TON	40675	32.13
10/19/2004	MANAGEMENT FEE	40678	33.03
10/19/2004	TRUCKING - PER TON	40678	33.03
10/19/2004	MANAGEMENT FEE	40681	34.54
10/19/2004	TRUCKING - PER TON	40681	34.54
10/19/2004	MANAGEMENT FEE	40686	33.59
10/19/2004	TRUCKING - PER TON	40686	33.59
10/19/2004	MANAGEMENT FEE	40688	32.45
10/19/2004	TRUCKING - PER TON	40688	32.45
10/19/2004	MANAGEMENT FEE	40691	35.41
10/19/2004	TRUCKING - PER TON	40691	35.41
10/19/2004	MANAGEMENT FEE	40694	33.35
10/19/2004	TRUCKING - PER TON	40694	33.35
10/19/2004	MANAGEMENT FEE	40700	33.39
10/19/2004	TRUCKING - PER TON	40700	33.39
10/19/2004	MANAGEMENT FEE	40701	34.13
10/19/2004	TRUCKING - PER TON	40701	34.13
10/19/2004	MANAGEMENT FEE	40707	33.83
10/19/2004	TRUCKING - PER TON	40707	33.83
10/19/2004	MANAGEMENT FEE	40709	33.90
10/19/2004	TRUCKING - PER TON	40709	33.90
10/19/2004	MANAGEMENT FEE	40710	32.70
10/19/2004	TRUCKING - PER TON	40710	32.70
10/19/2004	MANAGEMENT FEE	40716	32.56
10/19/2004	TRUCKING - PER TON	40716	32.56
10/19/2004	MANAGEMENT FEE	40719	35.02
10/19/2004	TRUCKING - PER TON	40719	35.02
10/19/2004	MANAGEMENT FEE	40725	32.93
10/19/2004	TRUCKING - PER TON	40725	32.93
10/19/2004	MANAGEMENT FEE	40726	36.42
10/19/2004	TRUCKING - PER TON	40726	36.42
10/19/2004	MANAGEMENT FEE	40728	33.17
10/19/2004	TRUCKING - PER TON	40728	33.17
10/19/2004	MANAGEMENT FEE	40731	33.42
10/19/2004	TRUCKING - PER TON	40731	33.42
10/19/2004	MANAGEMENT FEE	40739	35.01
10/19/2004	TRUCKING - PER TON	40739	35.01
10/19/2004	MANAGEMENT FEE	40744	32.90
10/19/2004	TRUCKING - PER TON	40744	32.90
10/19/2004	MANAGEMENT FEE	40747	33.68
10/19/2004	TRUCKING - PER TON	40747	33.68
10/19/2004	MANAGEMENT FEE	40748	33.87
10/19/2004	TRUCKING - PER TON	40748	33.87
10/19/2004	MANAGEMENT FEE	40752	32.97
10/19/2004	TRUCKING - PER TON	40752	32.97



## Appendix A. Continued

10/19/2004	MANAGEMENT FEE	40761	32.82
10/19/2004	TRUCKING - PER TON	40761	32.82
10/19/2004	MANAGEMENT FEE	40762	36.65
10/19/2004	TRUCKING - PER TON	40762	36.65
10/20/2004	MANAGEMENT FEE	40795	34.53
10/20/2004	TRUCKING - PER TON	40795	34.53
10/20/2004	MANAGEMENT FEE	40796	34.07
10/20/2004	TRUCKING - PER TON	40796	34.07
10/20/2004	MANAGEMENT FEE	40797	31.49
10/20/2004	TRUCKING - PER TON	40797	31.49
10/20/2004	MANAGEMENT FEE	40798	36.69
10/20/2004	TRUCKING - PER TON	40798	36.69
10/20/2004	MANAGEMENT FEE	40799	32.92
10/20/2004	TRUCKING - PER TON	40799	32.92
10/20/2004	MANAGEMENT FEE	40814	35.83
10/20/2004	TRUCKING - PER TON	40814	35.83
10/20/2004	MANAGEMENT FEE	40815	32.92
10/20/2004	TRUCKING - PER TON	40815	32.92
10/20/2004	MANAGEMENT FEE	40816	32.82
10/20/2004	TRUCKING - PER TON	40816	32.82
10/20/2004	MANAGEMENT FEE	40817	35.10
10/20/2004	TRUCKING - PER TON	40817	35.10
10/20/2004	MANAGEMENT FEE	40818	35.79
10/20/2004	TRUCKING - PER TON	40818	35.79
10/20/2004	MANAGEMENT FEE	40823	33.84
10/20/2004	TRUCKING - PER TON	40823	33.84
10/20/2004	MANAGEMENT FEE	40829	32.77
10/20/2004	TRUCKING - PER TON	40829	32.77
10/20/2004	MANAGEMENT FEE	40830	34.30
10/20/2004	TRUCKING - PER TON	40830	34.30
10/20/2004	MANAGEMENT FEE	40831	31.13
10/20/2004	TRUCKING - PER TON	40831	31.13
10/20/2004	MANAGEMENT FEE	40833	31.70
10/20/2004	TRUCKING - PER TON	40833	31.70
10/20/2004	MANAGEMENT FEE	40838	34.38
10/20/2004	TRUCKING - PER TON	40838	34.38
10/20/2004	MANAGEMENT FEE	40844	34.51
10/20/2004	TRUCKING - PER TON	40844	34.51
10/20/2004	MANAGEMENT FEE	40845	33.35
10/20/2004	TRUCKING - PER TON	40845	33.35
10/20/2004	MANAGEMENT FEE	40846	32.44
10/20/2004	TRUCKING - PER TON	40846	32.44
10/20/2004	MANAGEMENT FEE	40847	33.09
10/20/2004	TRUCKING - PER TON	40847	33.09
10/20/2004	MANAGEMENT FEE	40859	30.44
10/20/2004	TRUCKING - PER TON	40859	30.44
10/20/2004	MANAGEMENT FEE	40860	33.43
10/20/2004	TRUCKING - PER TON	40860	33.43
10/20/2004	MANAGEMENT FEE	40862	34.51
10/20/2004	TRUCKING - PER TON	40862	34.51
10/20/2004	MANAGEMENT FEE	40863	34.71
10/20/2004	TRUCKING - PER TON	40863	34.71
10/20/2004	MANAGEMENT FEE	40872	32.23
10/20/2004	TRUCKING - PER TON	40872	32.23
10/20/2004	MANAGEMENT FEE	40874	36.08
10/20/2004	TRUCKING - PER TON	40874	36.08
10/20/2004	MANAGEMENT FEE	40885	31.81
10/20/2004	TRUCKING - PER TON	40885	31.81
10/20/2004	MANAGEMENT FEE	40886	34.01
10/20/2004	TRUCKING - PER TON	40886	34.01
10/21/2004	MANAGEMENT FEE	40949	32.02



## Appendix A. Continued

10/21/2004	TRUCKING - PER TON	40949	32.02
10/21/2004	MANAGEMENT FEE	40952	31.88
10/21/2004	TRUCKING - PER TON	40952	31.88
10/21/2004	MANAGEMENT FEE	40953	35.13
10/21/2004	TRUCKING - PER TON	40953	35.13
10/21/2004	MANAGEMENT FEE	40972	33.45
10/21/2004	TRUCKING - PER TON	40972	33.45
10/21/2004	MANAGEMENT FEE	40973	32.88
10/21/2004	TRUCKING - PER TON	40973	32.88
10/21/2004	MANAGEMENT FEE	40974	31.57
10/21/2004	TRUCKING - PER TON	40974	31.57
10/21/2004	MANAGEMENT FEE	40975	33.81
10/21/2004	TRUCKING - PER TON	40975	33.81
10/21/2004	MANAGEMENT FEE	40987	32.26
10/21/2004	TRUCKING - PER TON	40987	32.26
10/21/2004	MANAGEMENT FEE	40988	33.34
10/21/2004	TRUCKING - PER TON	40988	33.34
10/21/2004	MANAGEMENT FEE	40989	34.81
10/21/2004	TRUCKING - PER TON	40989	34.81
10/21/2004	MANAGEMENT FEE	40993	32.08
10/21/2004	TRUCKING - PER TON	40993	32.08
10/21/2004	MANAGEMENT FEE	40994	33.06
10/21/2004	TRUCKING - PER TON	40994	33.06
10/21/2004	MANAGEMENT FEE	40995	35.04
10/21/2004	TRUCKING - PER TON	40995	35.04
10/22/2004	MANAGEMENT FEE	41014	32.11
10/22/2004	TRUCKING - PER TON	41014	32.11
10/22/2004	MANAGEMENT FEE	41015	35.54
10/22/2004	TRUCKING - PER TON	41015	35.54
10/22/2004	MANAGEMENT FEE	41016	32.62
10/22/2004	TRUCKING - PER TON	41016	32.62
10/22/2004	MANAGEMENT FEE	41017	35.00
10/22/2004	TRUCKING - PER TON	41017	35.00
10/22/2004	MANAGEMENT FEE	41018	31.73
10/22/2004	TRUCKING - PER TON	41018	31.73
10/22/2004	MANAGEMENT FEE	41019	33.42
10/22/2004	TRUCKING - PER TON	41019	33.42
10/22/2004	MANAGEMENT FEE	41020	32.80
10/22/2004	TRUCKING - PER TON	41020	32.80
10/22/2004	MANAGEMENT FEE	41042	33.12
10/22/2004	TRUCKING - PER TON	41042	33.12
10/22/2004	MANAGEMENT FEE	41044	36.38
10/22/2004	TRUCKING - PER TON	41044	36.38
10/22/2004	MANAGEMENT FEE	41050	33.64
10/22/2004	TRUCKING - PER TON	41050	33.64
10/22/2004	MANAGEMENT FEE	41051	33.07
10/22/2004	TRUCKING - PER TON	41051	33.07
10/22/2004	MANAGEMENT FEE	41052	34.17
10/22/2004	TRUCKING - PER TON	41052	34.17
10/22/2004	MANAGEMENT FEE	41053	34.02
10/22/2004	TRUCKING - PER TON	41053	34.02
10/22/2004	MANAGEMENT FEE	41054	34.12
10/22/2004	TRUCKING - PER TON	41054	34.12
10/22/2004	MANAGEMENT FEE	41055	31.54
10/22/2004	TRUCKING - PER TON	41055	31.54
10/22/2004	MANAGEMENT FEE	41062	34.32
10/22/2004	TRUCKING - PER TON	41062	34.32
10/22/2004	MANAGEMENT FEE	41063	32.30
10/22/2004	TRUCKING - PER TON	41063	32.30
10/22/2004	MANAGEMENT FEE	41064	35.73
10/22/2004	TRUCKING - PER TON	41064	35.73



## Appendix A. Continued

10/22/2004	MANAGEMENT FEE	41081	33.26
10/22/2004	TRUCKING - PER TON	41081	33.26
10/22/2004	MANAGEMENT FEE	41085	32.29
10/22/2004	TRUCKING - PER TON	41085	32.29
10/22/2004	MANAGEMENT FEE	41086	33.94
10/22/2004	TRUCKING - PER TON	41086	33.94
10/22/2004	MANAGEMENT FEE	41087	32.88
10/22/2004	TRUCKING - PER TON	41087	32.88
10/22/2004	MANAGEMENT FEE	41088	32.21
10/22/2004	TRUCKING - PER TON	41088	32.21
10/22/2004	MANAGEMENT FEE	41089	36.60
10/22/2004	TRUCKING - PER TON	41089	36.60
10/22/2004	MANAGEMENT FEE	41094	33.38
10/22/2004	TRUCKING - PER TON	41094	33.38
10/22/2004	MANAGEMENT FEE	41095	33.96
10/22/2004	TRUCKING - PER TON	41095	33.96
10/22/2004	MANAGEMENT FEE	41100	32.32
10/22/2004	TRUCKING - PER TON	41100	32.32
10/22/2004	MANAGEMENT FEE	41101	32.67
10/22/2004	TRUCKING - PER TON	41101	32.67
10/22/2004	MANAGEMENT FEE	41102	33.94
10/22/2004	TRUCKING - PER TON	41102	33.94
10/22/2004	MANAGEMENT FEE	41105	32.00
10/22/2004	TRUCKING - PER TON	41105	32.00
10/22/2004	MANAGEMENT FEE	41106	32.62
10/22/2004	TRUCKING - PER TON	41106	32.62
10/25/2004	MANAGEMENT FEE	41137	33.05
10/25/2004	TRUCKING - PER TON	41137	33.05
10/25/2004	MANAGEMENT FEE	41138	34.03
10/25/2004	TRUCKING - PER TON	41138	34.03
10/25/2004	MANAGEMENT FEE	41141	33.76
10/25/2004	TRUCKING - PER TON	41141	33.76
10/25/2004	MANAGEMENT FEE	41146	32.87
10/25/2004	TRUCKING - PER TON	41146	32.87
10/25/2004	MANAGEMENT FEE	41149	36.23
10/25/2004	TRUCKING - PER TON	41149	36.23
10/25/2004	MANAGEMENT FEE	41160	32.92
10/25/2004	TRUCKING - PER TON	41160	32.92
10/25/2004	MANAGEMENT FEE	41161	33.71
10/25/2004	TRUCKING - PER TON	41161	33.71
10/25/2004	MANAGEMENT FEE	41165	35.19
10/25/2004	TRUCKING - PER TON	41165	35.19
10/25/2004	MANAGEMENT FEE	41168	33.69
10/25/2004	TRUCKING - PER TON	41168	33.69
10/25/2004	MANAGEMENT FEE	41171	32.76
10/25/2004	TRUCKING - PER TON	41171	32.76
10/25/2004	MANAGEMENT FEE	41175	33.18
10/25/2004	TRUCKING - PER TON	41175	33.18
10/25/2004	MANAGEMENT FEE	41176	33.86
10/25/2004	TRUCKING - PER TON	41176	33.86
10/25/2004	MANAGEMENT FEE	41180	34.60
10/25/2004	TRUCKING - PER TON	41180	34.60
10/25/2004	MANAGEMENT FEE	41186	34.39
10/25/2004	TRUCKING - PER TON	41186	34.39
10/25/2004	MANAGEMENT FEE	41187	36.23
10/25/2004	TRUCKING - PER TON	41187	36.23
10/25/2004	MANAGEMENT FEE	41192	33.72
10/25/2004	TRUCKING - PER TON	41192	33.72
10/25/2004	MANAGEMENT FEE	41196	35.07
10/25/2004	TRUCKING - PER TON	41196	35.07
10/25/2004	MANAGEMENT FEE	41202	33.31



## Appendix A. Continued

10/25/2004	TRUCKING - PER TON	41202	33.31
10/25/2004	MANAGEMENT FEE	41210	32.59
10/25/2004	TRUCKING - PER TON	41210	32.59
10/25/2004	MANAGEMENT FEE	41211	35.26
10/25/2004	TRUCKING - PER TON	41211	35.26
10/25/2004	MANAGEMENT FEE	41214	33.84
10/25/2004	TRUCKING - PER TON	41214	33.84
10/25/2004	MANAGEMENT FEE	41217	34.22
10/25/2004	TRUCKING - PER TON	41217	34.22
10/25/2004	MANAGEMENT FEE	41224	32.55
10/25/2004	TRUCKING - PER TON	41224	32.55
10/25/2004	MANAGEMENT FEE	41227	32.98
10/25/2004	TRUCKING - PER TON	41227	32.98
10/25/2004	MANAGEMENT FEE	41228	34.78
10/25/2004	TRUCKING - PER TON	41228	34.78
10/25/2004	MANAGEMENT FEE	41229	26.40
10/25/2004	TRUCKING - PER TON	41229	26.40
10/26/2004	MANAGEMENT FEE	41242	34.37
10/26/2004	TRUCKING - PER TON	41242	34.37
10/26/2004	MANAGEMENT FEE	41245	32.07
10/26/2004	TRUCKING - PER TON	41245	32.07
10/26/2004	MANAGEMENT FEE	41246	31.79
10/26/2004	TRUCKING - PER TON	41246	31.79
10/26/2004	MANAGEMENT FEE	41247	33.02
10/26/2004	TRUCKING - PER TON	41247	33.02
10/26/2004	MANAGEMENT FEE	41253	33.58
10/26/2004	TRUCKING - PER TON	41253	33.58
10/26/2004	MANAGEMENT FEE	41256	32.03
10/26/2004	TRUCKING - PER TON	41256	32.03
10/26/2004	MANAGEMENT FEE	41257	32.08
10/26/2004	TRUCKING - PER TON	41257	32.08
10/26/2004	MANAGEMENT FEE	41262	27.70
10/26/2004	TRUCKING - PER TON	41262	27.70
10/26/2004	MANAGEMENT FEE	41265	32.93
10/26/2004	TRUCKING - PER TON	41265	32.93
10/26/2004	MANAGEMENT FEE	41272	33.61
10/26/2004	TRUCKING - PER TON	41272	33.61
10/26/2004	MANAGEMENT FEE	41273	33.29
10/26/2004	TRUCKING - PER TON	41273	33.29
10/26/2004	MANAGEMENT FEE	41287	30.63
10/26/2004	TRUCKING - PER TON	41287	30.63
10/26/2004	MANAGEMENT FEE	41288	32.72
10/26/2004	TRUCKING - PER TON	41288	32.72
10/26/2004	MANAGEMENT FEE	41292	34.12
10/26/2004	TRUCKING - PER TON	41292	34.12
10/26/2004	MANAGEMENT FEE	41293	32.39
10/26/2004	TRUCKING - PER TON	41293	32.39
10/26/2004	MANAGEMENT FEE	41298	33.31
10/26/2004	TRUCKING - PER TON	41298	33.31
10/26/2004	MANAGEMENT FEE	41300	33.32
10/26/2004	TRUCKING - PER TON	41300	33.32
10/26/2004	MANAGEMENT FEE	41302	34.52
10/26/2004	TRUCKING - PER TON	41302	34.52
10/26/2004	MANAGEMENT FEE	41304	33.06
10/26/2004	TRUCKING - PER TON	41304	33.06
10/26/2004	MANAGEMENT FEE	41316	33.21
10/26/2004	TRUCKING - PER TON	41316	33.21
10/26/2004	MANAGEMENT FEE	41320	33.31
10/26/2004	TRUCKING - PER TON	41320	33.31
10/26/2004	MANAGEMENT FEE	41325	32.95
10/26/2004	TRUCKING - PER TON	41325	32.95



## Appendix A. Continued

10/26/2004	MANAGEMENT FEE	41326	27.72
10/26/2004	TRUCKING - PER TON	41326	27.72
10/26/2004	MANAGEMENT FEE	41329	33.41
10/26/2004	TRUCKING - PER TON	41329	33.41
10/26/2004	MANAGEMENT FEE	41330	33.46
10/26/2004	TRUCKING - PER TON	41330	33.46
10/27/2004	MANAGEMENT FEE	41375	32.76
10/27/2004	TRUCKING - PER TON	41375	32.76
10/27/2004	MANAGEMENT FEE	41376	33.09
10/27/2004	TRUCKING - PER TON	41376	33.09
10/27/2004	MANAGEMENT FEE	41379	20.81
10/27/2004	TRUCKING - PER TON	41379	20.81
10/27/2004	MANAGEMENT FEE	41389	32.63
10/27/2004	TRUCKING - PER TON	41389	32.63
10/27/2004	MANAGEMENT FEE	41390	33.61
10/27/2004	TRUCKING - PER TON	41390	33.61
10/27/2004	MANAGEMENT FEE	41395	24.22
10/27/2004	TRUCKING - PER TON	41395	24.22
10/27/2004	MANAGEMENT FEE	41396	33.87
10/27/2004	TRUCKING - PER TON	41396	33.87
10/27/2004	MANAGEMENT FEE	41400	34.45
10/27/2004	TRUCKING - PER TON	41400	34.45
10/27/2004	MANAGEMENT FEE	41401	33.82
10/27/2004	TRUCKING - PER TON	41401	33.82
10/27/2004	MANAGEMENT FEE	41404	35.31
10/27/2004	TRUCKING - PER TON	41404	35.31
10/27/2004	MANAGEMENT FEE	41405	31.45
10/27/2004	TRUCKING - PER TON	41405	31.45
10/27/2004	MANAGEMENT FEE	41406	34.94
10/27/2004	TRUCKING - PER TON	41406	34.94
10/27/2004	MANAGEMENT FEE	41408	32.30
10/27/2004	TRUCKING - PER TON	41408	32.30
10/28/2004	MANAGEMENT FEE	41412	32.24
10/28/2004	TRUCKING - PER TON	41412	32.24
10/28/2004	MANAGEMENT FEE	41416	33.67
10/28/2004	TRUCKING - PER TON	41416	33.67
10/28/2004	MANAGEMENT FEE	41418	35.99
10/28/2004	TRUCKING - PER TON	41418	35.99
10/28/2004	MANAGEMENT FEE	41423	30.80
10/28/2004	TRUCKING - PER TON	41423	30.80
10/28/2004	MANAGEMENT FEE	41424	33.46
10/28/2004	TRUCKING - PER TON	41424	33.46
10/28/2004	MANAGEMENT FEE	41428	29.44
10/28/2004	TRUCKING - PER TON	41428	29.44
10/28/2004	MANAGEMENT FEE	41432	32.21
10/28/2004	TRUCKING - PER TON	41432	32.21
10/28/2004	MANAGEMENT FEE	41433	34.12
10/28/2004	TRUCKING - PER TON	41433	34.12
10/28/2004	MANAGEMENT FEE	41439	34.16
10/28/2004	TRUCKING - PER TON	41439	34.16
10/28/2004	MANAGEMENT FEE	41441	31.69
10/28/2004	TRUCKING - PER TON	41441	31.69
10/28/2004	MANAGEMENT FEE	41442	34.08
10/28/2004	TRUCKING - PER TON	41442	34.08
10/28/2004	MANAGEMENT FEE	41443	32.97
10/28/2004	TRUCKING - PER TON	41443	32.97
10/28/2004	MANAGEMENT FEE	41445	33.66
10/28/2004	TRUCKING - PER TON	41445	33.66
10/28/2004	TRUCKING - PER TON	41453	32.49
10/28/2004	MANAGEMENT FEE	41453	32.49
10/28/2004	TRUCKING - PER TON	41454	32.17



## Appendix A. Continued

10/28/2004	MANAGEMENT FEE	41454	32.17
10/28/2004	TRUCKING - PER TON	41456	33.58
10/28/2004	MANAGEMENT FEE	41456	33.58
10/28/2004	TRUCKING - PER TON	41460	35.82
10/28/2004	MANAGEMENT FEE	41460	35.82
10/28/2004	MANAGEMENT FEE	41466	32.20
10/28/2004	TRUCKING - PER TON	41466	32.20
10/28/2004	MANAGEMENT FEE	41467	35.83
10/28/2004	TRUCKING - PER TON	41467	35.83
10/28/2004	MANAGEMENT FEE	41473	33.07
10/28/2004	TRUCKING - PER TON	41473	33.07
10/28/2004	MANAGEMENT FEE	41474	32.14
10/28/2004	TRUCKING - PER TON	41474	32.14
10/28/2004	MANAGEMENT FEE	41475	33.34
10/28/2004	TRUCKING - PER TON	41475	33.34
10/28/2004	MANAGEMENT FEE	41477	32.52
10/28/2004	TRUCKING - PER TON	41477	32.52
10/28/2004	MANAGEMENT FEE	41488	33.67
10/28/2004	TRUCKING - PER TON	41488	33.67
10/28/2004	MANAGEMENT FEE	41494	32.78
10/28/2004	TRUCKING - PER TON	41494	32.78
10/28/2004	MANAGEMENT FEE	41495	34.75
10/28/2004	TRUCKING - PER TON	41495	34.75
10/28/2004	MANAGEMENT FEE	41496	31.98
10/28/2004	TRUCKING - PER TON	41496	31.98
10/28/2004	MANAGEMENT FEE	41497	35.41
10/28/2004	TRUCKING - PER TON	41497	35.41
10/28/2004	MANAGEMENT FEE	41498	33.63
10/28/2004	TRUCKING - PER TON	41498	33.63
10/28/2004	TRUCKING - PER TON	41500	33.80
10/28/2004	MANAGEMENT FEE	41500	33.80
10/28/2004	MANAGEMENT FEE	41502	32.01
10/28/2004	TRUCKING - PER TON	41502	32.01
10/28/2004	TRUCKING - PER TON	41505	19.17
10/28/2004	MANAGEMENT FEE	41505	19.17
10/29/2004	TRUCKING - PER TON	41510	33.94
10/29/2004	MANAGEMENT FEE	41510	33.94

**October Total      9678.26**

11/01/2004	TRUCKING - PER TON	41636	33.33
11/01/2004	MANAGEMENT FEE	41636	33.33
11/01/2004	TRUCKING - PER TON	41637	34.93
11/01/2004	MANAGEMENT FEE	41637	34.93
11/01/2004	TRUCKING - PER TON	41641	33.62
11/01/2004	MANAGEMENT FEE	41641	33.62
11/01/2004	TRUCKING - PER TON	41644	34.47
11/01/2004	MANAGEMENT FEE	41644	34.47
11/01/2004	TRUCKING - PER TON	41648	34.45
11/01/2004	MANAGEMENT FEE	41648	34.45
11/01/2004	TRUCKING - PER TON	41652	24.92
11/01/2004	MANAGEMENT FEE	41652	24.92
11/01/2004	TRUCKING - PER TON	41654	34.75
11/01/2004	MANAGEMENT FEE	41654	34.75
11/01/2004	TRUCKING - PER TON	41655	32.99
11/01/2004	MANAGEMENT FEE	41655	32.99
11/01/2004	TRUCKING - PER TON	41659	33.29
11/01/2004	MANAGEMENT FEE	41659	33.29
11/01/2004	TRUCKING - PER TON	41670	30.16



## Appendix A. Continued

11/01/2004	MANAGEMENT FEE	41670	30.16
11/01/2004	TRUCKING - PER TON	41671	32.34
11/01/2004	MANAGEMENT FEE	41671	32.34
11/01/2004	MANAGEMENT FEE	41673	33.14
11/01/2004	TRUCKING - PER TON	41673	33.14
11/01/2004	MANAGEMENT FEE	41680	27.18
11/01/2004	TRUCKING - PER TON	41680	27.18
11/01/2004	TRUCKING - PER TON	41681	33.12
11/01/2004	MANAGEMENT FEE	41681	33.12
11/01/2004	TRUCKING - PER TON	41682	34.23
11/01/2004	MANAGEMENT FEE	41682	34.23
11/01/2004	MANAGEMENT FEE	41686	32.86
11/01/2004	TRUCKING - PER TON	41686	32.86
11/01/2004	TRUCKING - PER TON	41687	32.76
11/01/2004	MANAGEMENT FEE	41687	32.76
11/01/2004	TRUCKING - PER TON	41691	33.47
11/01/2004	MANAGEMENT FEE	41691	33.47
11/01/2004	TRUCKING - PER TON	41692	31.87
11/01/2004	MANAGEMENT FEE	41692	31.87
11/01/2004	TRUCKING - PER TON	41698	33.40
11/01/2004	MANAGEMENT FEE	41698	33.40
11/02/2004	MANAGEMENT FEE	41697	33.09
11/02/2004	TRUCKING - PER TON	41697	33.09
11/02/2004	TRUCKING - PER TON	41702	32.66
11/02/2004	MANAGEMENT FEE	41702	32.66
11/02/2004	TRUCKING - PER TON	41704	32.97
11/02/2004	MANAGEMENT FEE	41704	32.97
11/02/2004	TRUCKING - PER TON	41705	34.65
11/02/2004	MANAGEMENT FEE	41705	34.65
11/02/2004	TRUCKING - PER TON	41706	31.85
11/02/2004	MANAGEMENT FEE	41706	31.85
11/02/2004	TRUCKING - PER TON	41711	32.51
11/02/2004	MANAGEMENT FEE	41711	32.51
11/02/2004	TRUCKING - PER TON	41715	32.98
11/02/2004	MANAGEMENT FEE	41715	32.98
11/02/2004	TRUCKING - PER TON	41717	32.95
11/02/2004	MANAGEMENT FEE	41717	32.95
11/02/2004	TRUCKING - PER TON	41719	33.62
11/02/2004	MANAGEMENT FEE	41719	33.62
11/02/2004	TRUCKING - PER TON	41720	33.29
11/02/2004	MANAGEMENT FEE	41720	33.29
11/02/2004	TRUCKING - PER TON	41722	33.10
11/02/2004	MANAGEMENT FEE	41722	33.10
11/02/2004	MANAGEMENT FEE	41723	31.80
11/02/2004	TRUCKING - PER TON	41723	31.80
11/02/2004	MANAGEMENT FEE	41727	30.89
11/02/2004	TRUCKING - PER TON	41727	30.89
11/02/2004	TRUCKING - PER TON	41731	33.04
11/02/2004	MANAGEMENT FEE	41731	33.04
11/02/2004	TRUCKING - PER TON	41733	33.22
11/02/2004	MANAGEMENT FEE	41733	33.22
11/02/2004	MANAGEMENT FEE	41734	32.98
11/02/2004	TRUCKING - PER TON	41734	32.98
11/02/2004	MANAGEMENT FEE	41737	28.83
11/02/2004	TRUCKING - PER TON	41737	28.83
11/02/2004	MANAGEMENT FEE	41739	34.29
11/02/2004	TRUCKING - PER TON	41739	34.29
11/02/2004	TRUCKING - PER TON	41740	32.89
11/02/2004	MANAGEMENT FEE	41740	32.89
11/02/2004	MANAGEMENT FEE	41749	36.86
11/02/2004	TRUCKING - PER TON	41749	36.86



## Appendix A. Continued

11/02/2004	MANAGEMENT FEE	41751	34.07
11/02/2004	TRUCKING - PER TON	41751	34.07
11/02/2004	MANAGEMENT FEE	41752	32.32
11/02/2004	TRUCKING - PER TON	41752	32.32
11/02/2004	MANAGEMENT FEE	41754	33.82
11/02/2004	TRUCKING - PER TON	41754	33.82
11/02/2004	MANAGEMENT FEE	41758	37.08
11/02/2004	TRUCKING - PER TON	41758	37.08
11/02/2004	MANAGEMENT FEE	41759	34.77
11/02/2004	TRUCKING - PER TON	41759	34.77
11/02/2004	MANAGEMENT FEE	41761	40.53
11/02/2004	TRUCKING - PER TON	41761	40.53
11/02/2004	MANAGEMENT FEE	41762	33.88
11/02/2004	TRUCKING - PER TON	41762	33.88
11/02/2004	MANAGEMENT FEE	41768	32.46
11/02/2004	TRUCKING - PER TON	41768	32.46
11/02/2004	MANAGEMENT FEE	41771	34.17
11/02/2004	TRUCKING - PER TON	41771	34.17
11/02/2004	MANAGEMENT FEE	41774	33.18
11/02/2004	TRUCKING - PER TON	41774	33.18
11/02/2004	MANAGEMENT FEE	41775	35.63
11/02/2004	TRUCKING - PER TON	41775	35.63
11/02/2004	MANAGEMENT FEE	41785	31.11
11/02/2004	TRUCKING - PER TON	41785	31.11
11/02/2004	MANAGEMENT FEE	41786	32.79
11/02/2004	TRUCKING - PER TON	41786	32.79
11/02/2004	MANAGEMENT FEE	41787	32.39
11/02/2004	TRUCKING - PER TON	41787	32.39
11/03/2004	MANAGEMENT FEE	41791	32.94
11/03/2004	TRUCKING - PER TON	41791	32.94
11/03/2004	MANAGEMENT FEE	41792	33.57
11/03/2004	TRUCKING - PER TON	41792	33.57
11/03/2004	MANAGEMENT FEE	41794	33.83
11/03/2004	TRUCKING - PER TON	41794	33.83
11/03/2004	MANAGEMENT FEE	41798	33.49
11/03/2004	TRUCKING - PER TON	41798	33.49
11/03/2004	MANAGEMENT FEE	41799	29.45
11/03/2004	TRUCKING - PER TON	41799	29.45
11/03/2004	MANAGEMENT FEE	41802	25.62
11/03/2004	TRUCKING - PER TON	41802	25.62
11/03/2004	MANAGEMENT FEE	41803	33.64
11/03/2004	TRUCKING - PER TON	41803	33.64
11/03/2004	MANAGEMENT FEE	41804	33.15
11/03/2004	TRUCKING - PER TON	41804	33.15
11/03/2004	MANAGEMENT FEE	41812	33.33
11/03/2004	TRUCKING - PER TON	41812	33.33
11/03/2004	MANAGEMENT FEE	41817	28.55
11/03/2004	TRUCKING - PER TON	41817	28.55
11/03/2004	MANAGEMENT FEE	41818	35.10
11/03/2004	TRUCKING - PER TON	41818	35.10
11/03/2004	MANAGEMENT FEE	41819	33.51
11/03/2004	TRUCKING - PER TON	41819	33.51
11/03/2004	MANAGEMENT FEE	41832	33.71
11/03/2004	TRUCKING - PER TON	41832	33.71
11/03/2004	MANAGEMENT FEE	41833	36.09
11/03/2004	TRUCKING - PER TON	41833	36.09
11/03/2004	MANAGEMENT FEE	41834	33.31
11/03/2004	TRUCKING - PER TON	41834	33.31
11/03/2004	MANAGEMENT FEE	41835	38.16
11/03/2004	TRUCKING - PER TON	41835	38.16
11/03/2004	MANAGEMENT FEE	41838	35.55



## Appendix A. Continued

11/03/2004	TRUCKING - PER TON	41838	35.55
11/03/2004	MANAGEMENT FEE	41862	33.91
11/03/2004	TRUCKING - PER TON	41862	33.91
11/03/2004	MANAGEMENT FEE	41863	32.57
11/03/2004	TRUCKING - PER TON	41863	32.57
11/03/2004	MANAGEMENT FEE	41864	33.36
11/03/2004	TRUCKING - PER TON	41864	33.36
11/03/2004	MANAGEMENT FEE	41865	35.13
11/03/2004	TRUCKING - PER TON	41865	35.13
11/03/2004	MANAGEMENT FEE	41866	33.89
11/03/2004	TRUCKING - PER TON	41866	33.89
11/03/2004	MANAGEMENT FEE	41867	35.48
11/03/2004	TRUCKING - PER TON	41867	35.48
11/03/2004	MANAGEMENT FEE	41868	33.65
11/03/2004	TRUCKING - PER TON	41868	33.65
11/03/2004	MANAGEMENT FEE	41869	33.01
11/03/2004	TRUCKING - PER TON	41869	33.01
11/03/2004	MANAGEMENT FEE	41870	29.61
11/03/2004	TRUCKING - PER TON	41870	29.61
11/03/2004	MANAGEMENT FEE	41876	32.87
11/03/2004	TRUCKING - PER TON	41876	32.87
11/03/2004	MANAGEMENT FEE	41877	27.38
11/03/2004	TRUCKING - PER TON	41877	27.38
11/03/2004	MANAGEMENT FEE	41878	33.92
11/03/2004	TRUCKING - PER TON	41878	33.92
11/03/2004	MANAGEMENT FEE	41883	33.25
11/03/2004	TRUCKING - PER TON	41883	33.25
11/03/2004	MANAGEMENT FEE	41885	32.43
11/03/2004	TRUCKING - PER TON	41885	32.43
11/03/2004	MANAGEMENT FEE	41886	33.58
11/03/2004	TRUCKING - PER TON	41886	33.58
11/03/2004	MANAGEMENT FEE	41887	31.16
11/03/2004	TRUCKING - PER TON	41887	31.16
11/03/2004	MANAGEMENT FEE	41889	32.20
11/03/2004	TRUCKING - PER TON	41889	32.20
11/03/2004	MANAGEMENT FEE	41893	32.89
11/03/2004	TRUCKING - PER TON	41893	32.89
11/03/2004	MANAGEMENT FEE	41894	34.50
11/03/2004	TRUCKING - PER TON	41894	34.50
11/03/2004	MANAGEMENT FEE	41895	32.11
11/03/2004	TRUCKING - PER TON	41895	32.11
11/04/2004	MANAGEMENT FEE	41908	33.64
11/04/2004	TRUCKING - PER TON	41908	33.64
11/04/2004	MANAGEMENT FEE	41910	32.32
11/04/2004	TRUCKING - PER TON	41910	32.32
11/04/2004	MANAGEMENT FEE	41914	29.59
11/04/2004	TRUCKING - PER TON	41914	29.59
11/04/2004	MANAGEMENT FEE	41915	26.74
11/04/2004	TRUCKING - PER TON	41915	26.74
11/04/2004	MANAGEMENT FEE	41928	31.10
11/04/2004	TRUCKING - PER TON	41928	31.10
11/04/2004	MANAGEMENT FEE	41929	33.69
11/04/2004	TRUCKING - PER TON	41929	33.69
11/04/2004	MANAGEMENT FEE	41930	32.95
11/04/2004	TRUCKING - PER TON	41930	32.95
11/04/2004	MANAGEMENT FEE	41931	33.78
11/04/2004	TRUCKING - PER TON	41931	33.78
11/04/2004	MANAGEMENT FEE	41932	33.70
11/04/2004	TRUCKING - PER TON	41932	33.70
11/04/2004	MANAGEMENT FEE	41942	28.82
11/04/2004	TRUCKING - PER TON	41942	28.82



## Appendix A. Continued

11/04/2004	MANAGEMENT FEE	41943	33.02
11/04/2004	TRUCKING - PER TON	41943	33.02
11/04/2004	MANAGEMENT FEE	41944	32.72
11/04/2004	TRUCKING - PER TON	41944	32.72
11/04/2004	MANAGEMENT FEE	41945	34.72
11/04/2004	TRUCKING - PER TON	41945	34.72
11/04/2004	MANAGEMENT FEE	41959	33.58
11/04/2004	TRUCKING - PER TON	41959	33.58
11/04/2004	MANAGEMENT FEE	41962	32.75
11/04/2004	TRUCKING - PER TON	41962	32.75
11/04/2004	MANAGEMENT FEE	41963	32.22
11/04/2004	TRUCKING - PER TON	41963	32.22
11/04/2004	MANAGEMENT FEE	41964	34.21
11/04/2004	TRUCKING - PER TON	41964	34.21
11/04/2004	MANAGEMENT FEE	41965	30.33
11/04/2004	TRUCKING - PER TON	41965	30.33
11/04/2004	MANAGEMENT FEE	41966	33.11
11/04/2004	TRUCKING - PER TON	41966	33.11
11/04/2004	MANAGEMENT FEE	41967	33.30
11/04/2004	TRUCKING - PER TON	41967	33.30
11/04/2004	MANAGEMENT FEE	41968	32.37
11/04/2004	TRUCKING - PER TON	41968	32.37
11/04/2004	MANAGEMENT FEE	41969	33.36
11/04/2004	TRUCKING - PER TON	41969	33.36
11/04/2004	MANAGEMENT FEE	41970	32.36
11/04/2004	TRUCKING - PER TON	41970	32.36
11/04/2004	MANAGEMENT FEE	41978	32.05
11/04/2004	TRUCKING - PER TON	41978	32.05
11/04/2004	MANAGEMENT FEE	41979	33.71
11/04/2004	TRUCKING - PER TON	41979	33.71
11/04/2004	MANAGEMENT FEE	41980	30.09
11/04/2004	TRUCKING - PER TON	41980	30.09
11/04/2004	MANAGEMENT FEE	41986	33.09
11/04/2004	TRUCKING - PER TON	41986	33.09
11/04/2004	MANAGEMENT FEE	41992	16.42
11/04/2004	TRUCKING - PER TON	41992	16.42
11/04/2004	MANAGEMENT FEE	41994	32.12
11/04/2004	TRUCKING - PER TON	41994	32.12
11/08/2004	MANAGEMENT FEE	42152	38.18
11/08/2004	TRUCKING - PER TON	42152	38.18
11/08/2004	MANAGEMENT FEE	42157	21.03
11/08/2004	TRUCKING - PER TON	42157	21.03
11/08/2004	MANAGEMENT FEE	42158	33.29
11/08/2004	TRUCKING - PER TON	42158	33.29
11/08/2004	MANAGEMENT FEE	42160	31.91
11/08/2004	TRUCKING - PER TON	42160	31.91
11/08/2004	MANAGEMENT FEE	42162	32.86
11/08/2004	TRUCKING - PER TON	42162	32.86
11/08/2004	MANAGEMENT FEE	42165	24.67
11/08/2004	TRUCKING - PER TON	42165	24.67
11/08/2004	MANAGEMENT FEE	42167	33.27
11/08/2004	TRUCKING - PER TON	42167	33.27
11/08/2004	MANAGEMENT FEE	42170	33.92
11/08/2004	TRUCKING - PER TON	42170	33.92
11/08/2004	MANAGEMENT FEE	42172	32.76
11/08/2004	TRUCKING - PER TON	42172	32.76
11/08/2004	MANAGEMENT FEE	42173	32.82
11/08/2004	TRUCKING - PER TON	42173	32.82
11/08/2004	MANAGEMENT FEE	42175	32.97
11/08/2004	TRUCKING - PER TON	42175	32.97
11/08/2004	MANAGEMENT FEE	42187	40.15



## Appendix A. Continued

11/08/2004	TRUCKING - PER TON	42187	40.15
11/08/2004	MANAGEMENT FEE	42188	33.46
11/08/2004	TRUCKING - PER TON	42188	33.46
11/08/2004	MANAGEMENT FEE	42189	35.57
11/08/2004	TRUCKING - PER TON	42189	35.57
11/08/2004	MANAGEMENT FEE	42194	33.63
11/08/2004	TRUCKING - PER TON	42194	33.63
11/08/2004	MANAGEMENT FEE	42199	33.80
11/08/2004	TRUCKING - PER TON	42199	33.80
11/08/2004	MANAGEMENT FEE	42201	34.20
11/08/2004	TRUCKING - PER TON	42201	34.20
11/08/2004	MANAGEMENT FEE	42205	32.55
11/08/2004	TRUCKING - PER TON	42205	32.55
11/08/2004	MANAGEMENT FEE	42206	33.88
11/08/2004	TRUCKING - PER TON	42206	33.88
11/08/2004	MANAGEMENT FEE	42211	33.81
11/08/2004	TRUCKING - PER TON	42211	33.81
11/08/2004	MANAGEMENT FEE	42212	33.19
11/08/2004	TRUCKING - PER TON	42212	33.19
11/08/2004	MANAGEMENT FEE	42213	32.47
11/08/2004	TRUCKING - PER TON	42213	32.47
11/09/2004	MANAGEMENT FEE	42226	30.78
11/09/2004	TRUCKING - PER TON	42226	30.78
11/09/2004	MANAGEMENT FEE	42234	32.20
11/09/2004	TRUCKING - PER TON	42234	32.20
11/09/2004	MANAGEMENT FEE	42235	33.15
11/09/2004	TRUCKING - PER TON	42235	33.15
11/09/2004	MANAGEMENT FEE	42236	30.56
11/09/2004	TRUCKING - PER TON	42236	30.56
11/09/2004	MANAGEMENT FEE	42240	31.77
11/09/2004	TRUCKING - PER TON	42240	31.77
11/09/2004	MANAGEMENT FEE	42244	34.14
11/09/2004	TRUCKING - PER TON	42244	34.14
11/09/2004	MANAGEMENT FEE	42245	25.87
11/09/2004	TRUCKING - PER TON	42245	25.87
11/09/2004	MANAGEMENT FEE	42247	33.47
11/09/2004	TRUCKING - PER TON	42247	33.47
11/09/2004	MANAGEMENT FEE	42248	32.78
11/09/2004	TRUCKING - PER TON	42248	32.78
11/09/2004	MANAGEMENT FEE	42251	32.27
11/09/2004	TRUCKING - PER TON	42251	32.27
11/09/2004	MANAGEMENT FEE	42257	33.64
11/09/2004	TRUCKING - PER TON	42257	33.64
11/09/2004	MANAGEMENT FEE	42263	33.81
11/09/2004	TRUCKING - PER TON	42263	33.81
11/09/2004	MANAGEMENT FEE	42269	32.51
11/09/2004	TRUCKING - PER TON	42269	32.51
11/09/2004	MANAGEMENT FEE	42274	31.45
11/09/2004	TRUCKING - PER TON	42274	31.45
11/09/2004	MANAGEMENT FEE	42281	33.45
11/09/2004	TRUCKING - PER TON	42281	33.45
11/09/2004	MANAGEMENT FEE	42282	27.21
11/09/2004	TRUCKING - PER TON	42282	27.21
11/09/2004	MANAGEMENT FEE	42284	36.97
11/09/2004	TRUCKING - PER TON	42284	36.97
11/09/2004	MANAGEMENT FEE	42288	31.79
11/09/2004	TRUCKING - PER TON	42288	31.79
11/09/2004	MANAGEMENT FEE	42289	32.65
11/09/2004	TRUCKING - PER TON	42289	32.65
11/09/2004	MANAGEMENT FEE	42290	33.96
11/09/2004	TRUCKING - PER TON	42290	33.96



## Appendix A. Continued

11/09/2004	MANAGEMENT FEE	42291	32.22
11/09/2004	TRUCKING - PER TON	42291	32.22
11/09/2004	MANAGEMENT FEE	42303	29.18
11/09/2004	TRUCKING - PER TON	42303	29.18
11/09/2004	MANAGEMENT FEE	42311	32.21
11/09/2004	TRUCKING - PER TON	42311	32.21
11/09/2004	MANAGEMENT FEE	42324	32.38
11/09/2004	TRUCKING - PER TON	42324	32.38
11/09/2004	MANAGEMENT FEE	42325	33.06
11/09/2004	TRUCKING - PER TON	42325	33.06
11/09/2004	MANAGEMENT FEE	42326	32.43
11/09/2004	TRUCKING - PER TON	42326	32.43
11/09/2004	MANAGEMENT FEE	42329	34.32
11/09/2004	TRUCKING - PER TON	42329	34.32
11/10/2004	MANAGEMENT FEE	42337	34.78
11/10/2004	TRUCKING - PER TON	42337	34.78
11/10/2004	MANAGEMENT FEE	42340	33.26
11/10/2004	TRUCKING - PER TON	42340	33.26
11/10/2004	MANAGEMENT FEE	42342	34.91
11/10/2004	TRUCKING - PER TON	42342	34.91
11/10/2004	MANAGEMENT FEE	42347	25.09
11/10/2004	TRUCKING - PER TON	42347	25.09
11/10/2004	MANAGEMENT FEE	42349	33.45
11/10/2004	TRUCKING - PER TON	42349	33.45
11/10/2004	MANAGEMENT FEE	42355	33.86
11/10/2004	TRUCKING - PER TON	42355	33.86
11/10/2004	MANAGEMENT FEE	42358	32.65
11/10/2004	TRUCKING - PER TON	42358	32.65
11/10/2004	MANAGEMENT FEE	42359	33.57
11/10/2004	TRUCKING - PER TON	42359	33.57
11/10/2004	MANAGEMENT FEE	42362	34.13
11/10/2004	TRUCKING - PER TON	42362	34.13
11/10/2004	MANAGEMENT FEE	42375	19.95
11/10/2004	TRUCKING - PER TON	42375	19.95
11/09/2004	TRUCKING - ADJUSTMENT	MIN 30 T OCT	1.00
Nov. Total			5839.98
Project Total			15,518.24



## Appendix B: Example Scale Receipts Including the First and Last for the Project



**WASCO COUNTY LANDFILL, INC.**

2550 STEELE ROAD  
THE DALLES, OR 97058

TEL: 541-296-4082

DATE: 10/14/04  
TICKET NUMBER: 40281

TIME IN: 12:48 PM  
TIME OUT: 12:00 AM

ACCOUNT #: 225-004

CUSTOMER: HICKEY MARINE ENTERPRISES-089  
6801 OLD LOWER RIVER RD  
VANCOUVER, WA 98660

### SCALE READINGS

Gross:	106,700 lbs	53.35 Tons
Tare:	39,640 lbs	19.82 Tons
Net Wt:	67,060 lbs	33.53 Tons

WASTE SOURCE: MULTNOMAH CO

TRUCK: 57  
COMMENT: AARON

Waste Type	Material Description	Unit Price	Tax	Extended Price
HANDLING	HANDLING FEE	---	---	---

By signing this, I certify that this disposal material originated in the county/state as stated above. I also certify that to the best of my knowledge this load contains no hazardous or 'special' waste, and is not potentially dangerous to landfill customers, employees, or to the environment.

WEIGHMASTER \_\_\_\_\_

DRIVER SIGNATURE: \_\_\_\_\_



**WASCO COUNTY LANDFILL, INC.**

2550 STEELE ROAD  
THE DALLES, OR 97058

TEL: 541-296-4082

DATE: 11/10/04  
TICKET NUMBER: 42375

*miw 30.20w  
C/Samp Log*

ACCOUNT #: 225-004

CUSTOMER: HICKEY MARINE ENTERPRISES-089  
6801 OLD LOWER RIVER RD  
VANCOUVER, WA 98660

### SCALE READINGS

Gross:	78,640 lbs	39.32 Tons
Tare:	38,740 lbs	19.37 Tons
Net Wt:	39,900 lbs	19.95 Tons

WASTE SOURCE: MULTNOMAH CO

TRUCK: 57  
COMMENT: TRAVIS

Waste Type	Material Description	Unit Price	Tax	Extended Price
MGT FEE	MANAGEMENT FEE	---	---	---

By signing this, I certify that this disposal material originated in the county/state as stated above. I also certify that to the best of my knowledge this load contains no hazardous or 'special' waste, and is not potentially dangerous to landfill customers, employees, or to the environment.

WEIGHMASTER \_\_\_\_\_

DRIVER SIGNATURE: \_\_\_\_\_

PARSONS  
BRINCKERHOFF

B-1

Post-Dredging Report  
Schnitzer Steel Industries, Inc.  
February 11, 2005

SCHN00272906



Oct-31-2000 10:01am

From-SCHNITZER JEL

5032882277

T-363

P. 002/002

F-885

C. Bruce Ward  
Chairman of the Board

Gunderson Inc.  
4350 NW Front Avenue  
Portland, Oregon 97210

October 16, 2000

Mr. Robert Philip  
Schnitzer Steel Industries, Inc.  
P.O. Box 1047  
Portland, OR 97295

RE: Gunderson Front Avenue Property

Dear Bob:

Following up on your recent conversation with Bill Furman, Gunderson, Inc. owns and operates property at 4350 NW Front Avenue in Portland. Prior to the early 1980's, the southeastern part of the property (Tax Lot 57) was owned and operated by Schnitzer entries: American Ship Dismantlers operated at 4012 NW Front Avenue and Schnitzer Steel operated at 4250 NW Front Avenue. Since the lots were combined into single ownership, Gunderson and it's predecessor have used this property primarily for materials storage.

This property borders the proposed Portland Harbor Superfund site. The Oregon Department of Environmental Quality has asked Gunderson to investigate the former Schnitzer owned portion of its property in order to determine whether it is a current or a former source of sediment contamination. DEQ has expressed a specific interest in the former activities of American Ship Dismantlers. However, there is some evidence that past auto wrecking activities may have also contributed to contamination on the site. At DEQ's request, Gunderson is about to embark on a preliminary site assessment of this portion of its property. I would like Schnitzer to have the opportunity to participate in this assessment since it appears that the results of the assessment will likely demonstrate that any environmental contamination occurred before Gunderson began operations at the property.

Please call me (or Gunderson's President, Tom Sass), so that we can develop a suitable mechanism for Schnitzer's participation in the process.

Sincerely,

*Bruce*

Bruce Ward

cc: William Furman

~~Tom Sass~~

SCHN00273627





# Oregon

John A. Kitzhaber, M.D., Governor

## Department of Environmental Quality

811 SW Sixth Avenue  
Portland, OR 97204-1390  
(503) 229-5696  
TDD (503) 229-6993

June 22, 2000

Krista I. Born  
Stoel Rives LLP  
900 SW Fifth Avenue Ste. 2600  
Portland, Oregon 97204

**RE: LISTING COMMENTS RECEIVED**

Schnitzer Investment Corp.  
4959 NW Front Avenue, Portland  
ECSI #2442

Dear Ms. Born:

Thank you for taking the time to comment on DEQ's proposal to list the Schnitzer Investment Corp. site on the Confirmed Release List. The Department received these comments on June 20, 2000, and will be responding in writing to each issue you have raised. Specific responses, to be prepared by project manager Eric Blischke, will be incorporated into the listing decision letter. This letter will be sent from the Department's headquarters office as quickly as possible, but the timing will depend upon the project manager Eric Blischke's current workload and priorities.

As indicated in the listing proposal letter, the Department will track its costs in responding to your comments, and will invoice the responsible party for the costs associated with the review process, unless the Department's decision is not to list your site.

Once again, the Department appreciates your attention to this important matter. While you await the Department's listing decision letter, if you have any general questions about the listing process, please call me at (503) 229-5256. If you have any technical questions about the site or the time frame for receiving a response from the Department, please contact Eric Blischke at (503) 229-5648.

Sincerely,

Kimberlee Van-Patten  
Listing Coordinator

cc: Paul Slyman; Administrator, DEQ, Environmental Cleanup Division  
Chuck Donaldson; Manager, DEQ Spills and Assessment Section  
Mark Pugh; NWR, DEQ  
ECSI file #2442

RECEIVED

By 6/26/00 nh  
cc: JPS

DEQ-1

SCHN00273682



M.C.1a

VOLUNTARY AGREEMENT FOR  
REMEDIAL INVESTIGATION AND SOURCE CONTROL MEASURES

DEQ NO. WMCVC- NWR- 0015

BETWEEN: Schnitzer Investment Corporation (Schnitzer)

AND: Oregon Department of Environmental Quality (DEQ)

EFFECTIVE DATE: May \_\_\_\_, 2000

Pursuant to ORS 465.260(2) and (4), the Director, Oregon Department of Environmental Quality (DEQ), enters this Agreement with Schnitzer Investment Corporation (Schnitzer). This Agreement contains the following provisions:

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I. RECITALS

- A. Schnitzer is a "person" under ORS 465.200(20).
- B. The Schnitzer site occupies approximately 200 acres at 12005 N. Burgard Road, Portland, Oregon. A vicinity map and a site map are included in Attachment A to this Agreement. The Schnitzer site does not include the property that was formerly leased to Premier Edible Oils and C&T Quincy Foods.
- C. The Schnitzer site is located within or near what is known as the Portland Harbor, a six-mile reach of the Willamette River between Sauvie Island and Swan Island. A 1997 study by DEQ and the U.S. Environmental Protection Agency identified elevated levels of

SCHN00273733



hazardous substances in shallow, near-shore sediments throughout the Portland Harbor.

D. Schnitzer has owned the Site since 1972. Current site operations are varied. Schnitzer Steel Industries (SSI) operates a scrap metal recycling yard and deep marine terminal at the Site. SSI processes, stores, and exports recyclable materials on approximately 93 acres. Its shipping docks are located along the Site's western riverfront and an approximate 11-acre slip (International Terminals Slip). \*Other current Site operations include nonferrous metals recovery, fabrication and painting of automobile transport trailers, truck maintenance, ocean shipping container storage and repair facility, machine shop, sandblasting, and the manufacture of protective coatings. \*Recent site operations also included processing, storing and shipping of cooking oils and warehousing.

\* E. Materials used and stored on-site include diesel, hydraulic oil, waste oil and other petroleum products; paint, hardeners, and solvents. Primary wastes generated by SSI and other site operators include non-metallic rail car and other scrap operation debris, used oil, used antifreeze, used solvent and solid wastes. At least eight releases of petroleum to the Willamette River from the Schnitzer site have been reported since 1979. Previous investigations have detected contamination in soil and groundwater on, and sediments adjacent to, the Site.

\* F. The following contaminants were detected in sediment samples collected adjacent to the Schnitzer site at concentrations exceeding baseline concentrations established for the Portland Harbor Study Area: antimony, arsenic, barium, cadmium, cobalt, copper, chromium, iron, manganese, lead, mercury, nickel, silver, zinc, organotins, bis (2-ethylhexyl) phthalate, butylbenzylphthalate, carbazole, dibenzofuran, 2-methylnaphthylene, and low- and high- molecular weight polynuclear aromatic hydrocarbons (LPAHs and HPAHs, respectively). Concentrations of antimony, carbazole, dibenzofuran, mercury, zinc, LPAHs, and HPAHs were all more than twice their respective baseline values. Concentrations of organotins at one sediment sample location were more than 150 times the baseline value. Investigations have also disclosed contamination of soil and groundwater at the Site.

The substances described in this section are "hazardous substances" under ORS 465.200(15). \*The presence of hazardous substances in soil, groundwater, and sediments at or near the site constitutes a "release" or "threat of release" into the environment under ORS 465.200(21). The Schnitzer site and the contaminated sediments at or near the site are a "facility" under ORS 465.200(12).

\* DEQ contentions, not admitted by Schnitzer



- G. DEQ considers the activities required by this Agreement to be necessary to protect public health, safety, and welfare and the environment.

## II. AGREEMENT

The parties agree as follows:

### A. Work

#### 1. Remedial Investigation

Schnitzer shall perform a remedial investigation satisfying OAR 340-122-0080, the terms and schedule of a DEQ approved work plan developed by Schnitzer, and applicable elements of the Scope of Work contained in Attachment B to this Agreement. Schnitzer may specify, in the proposed work plan, elements of the Scope of Work that [NAME of PARTY] considers inapplicable or unnecessary to the remedial investigation for the facility. Schnitzer may propose to perform the work in phases or operable units.

#### 2. Source Control Measures

For any unpermitted discharge or migration of contaminants to the Willamette River or sediments identified in the remedial investigation, Schnitzer shall evaluate such discharge or migration, and then develop and implement source control measures in accordance with the Scope of Work.

#### 3. DEQ-Review

DEQ shall provide review, approvals/disapprovals, and oversight in accordance with the schedule set forth in the Scope of Work, or as soon as thereafter practicable in the event staff resources or workload prevent compliance with the schedule. Any DEQ delay shall correspondingly extend Schnitzer's schedule for a related deliverable or activity.

#### 4. Additional Measures

Schnitzer may elect at any time during the term of this Agreement to undertake remedial measures other than those required under this Agreement necessary to address a release or threatened release of hazardous substances at the facility. Such other measures shall be subject to prior approval by DEQ. Prior approval shall not be required in emergencies where Schnitzer reasonably believes a delay in undertaking a particular action will threaten human health,



safety, or the environment; provided that Schnitzer notifies DEQ of the emergency and action as soon as is practicable.

#### 5. Dredging Activities

Schnitzer shall notify the DEQ project manager at least sixty (60) days before undertaking any dredging or other activity that might disturb sediments at or near the facility. In its notice of dredging or other activity, Schnitzer shall: (a) Evaluate the concentration of hazardous substances present in and below the affected sediments based on sampling and analyses performed in advance of the notice; (b) Document the steps to be taken to ensure that both the activity and the subsequent management and disposal of dredged spoils will be conducted in a manner protective of human health and the environment; and (c) Evaluate the effect of the activity on the Portland Harbor Remedial Investigation and Feasibility Study. Dredging may proceed under existing permits subject to the above notice and implementation of any additional dredging or management practices required by DEQ. DEQ shall also be notified of and copied on any permit application to the Oregon Division of State Lands or United States Army Corps of Engineers for dredging or other activity disturbing sediments adjacent to the Schnitzer site. Notwithstanding the foregoing, Schnitzer may conduct dredging or other activities that might disturb sediments at or near the facility without giving DEQ 60 days' notice, if such activities are conducted in accordance with an effective Dredging Agreement between Schnitzer and DEQ that describes the notification and sampling requirements, dredging, management, and disposal practices, and any other measures that Schnitzer will take to ensure that all activities within the scope of the Dredging Agreement are conducted in a manner that is protective of human health and the environment and consistent with Harborwide cleanup work.

#### B. Public Participation

Upon execution of this Agreement, DEQ will provide public notice of this Agreement through issuance of a press release, at a minimum to a local newspaper of general circulation, describing the measures required under this Agreement. Copies of the Agreement will be made available to the public. DEQ shall provide Schnitzer a draft of such press release and consider any comments by Schnitzer on the draft press release, before publication.



C. DEQ Access and Oversight

1. Schnitzer shall allow DEQ to enter all portions of the facility at all reasonable times for the purposes, among other things, of inspecting records relating to work under this Agreement; observing Schnitzer's progress in implementing this Agreement; conducting such tests and taking such samples as DEQ deems necessary; verifying data submitted to DEQ by Schnitzer; and, using camera, sound recording, or other recording equipment for purposes relating to work under this Agreement. Upon Schnitzer's verbal request, DEQ shall make available to Schnitzer a split or duplicate of any sample or recording taken by DEQ pursuant to this Agreement. DEQ shall use its best efforts, but not be obligated, to provide reasonable advance notice before entering the facility. DEQ shall adhere to all health and safety requirements of the facility, as identified in the applicable Health and Safety Plan, including, but not limited to, requirements in portions of the Site where outside visitors must be accompanied by company personnel.
2. Schnitzer shall permit DEQ to inspect and copy all records, files, photographs, documents, and data in connection with work under this Agreement, except that Schnitzer shall not be required to permit DEQ inspection or copying of items subject to attorney-client or attorney work product privilege. DEQ shall use its best efforts, but not be obligated, to provide reasonable notice before records inspection and copying requests.
3. Attorney-client and work product privileges may not be asserted with respect to any records required under Paragraphs II.G.1 and II.G.2 of this Agreement. Schnitzer shall identify to DEQ--by addressor-addressee, date, general subject matter, and distribution--any document, record, or item withheld from DEQ on the basis of attorney-client or attorney work product privilege. DEQ reserves its rights under law to obtain documents DEQ asserts are improperly withheld by Schnitzer.



**D. Project Managers**

1. To the extent possible, all reports, notices, and other communications required under or relating to this Agreement shall be directed to:

DEQ Project Manager:

Alicia C. Voss  
Voluntary Cleanup and  
Portland Harbor Section  
2020 SW Fourth, Suite 400  
Portland, Oregon 97204  
503-229-5011

Schnitzer Project Manager:

Tom Zelenka  
Schnitzer Investment  
Corporation  
P.O. Box 10047  
Portland, Oregon 97296-0047  
503-224-9900

2. Schnitzer's and DEQ's Project Managers shall be available and have the authority to make day-to-day decisions necessary to complete the Scope of Work under this Agreement.

**E. Notice and Samples**

Schnitzer shall make every reasonable attempt to notify DEQ of any excavation, drilling, or sampling to be conducted under this Agreement at least five (5) working days before such activity but in no event less than twenty-four (24) hours before such activity. Upon DEQ's verbal request, Schnitzer shall make available to DEQ a split or duplicate of any sample taken pursuant to this Agreement. DEQ shall make every effort to complete analysis of any split or duplicate sample on a schedule consistent with Schnitzer's schedule for related activities. DEQ shall provide Schnitzer with copies of all analytical data from such samples as soon as practicable.

**F. Quality Assurance**

Schnitzer shall conduct all sampling, sample transport, and sample analysis in accordance with the Quality Assurance/ Quality Control (QA/QC) provisions approved by DEQ as part of the work plan. All plans prepared and work conducted as part of this Agreement shall be consistent with DEQ's "Quality Assurance Policy No. 760.00". Schnitzer shall ensure that each laboratory used by Schnitzer for analysis performs such analyses in accordance with such provisions.

**G. Records**

1. In addition to those technical reports and documents specifically required under this Agreement, Schnitzer shall provide to DEQ within thirty (30) days of DEQ's written request copies of documents generated in connection with the



work required under this Agreement, including QA/QC memoranda and QA/QC audits, draft and final deliverable plans, final reports, task memoranda, field notes, and laboratory analytical data that have undergone data quality validation.

2. If DEQ determines that review of raw data or preliminary laboratory reports is necessary in order to ensure protection of public health, safety, and welfare and the environment, that information will be provided by Schnitzer within ten (10) days of DEQ's written request.
3. Schnitzer and DEQ shall preserve all records and documents in possession or control of Schnitzer and DEQ, respectively, or their employees, agents, or contractors that relate in any way to activities under this Agreement for at least five (5) years after termination under Subsection II.R. of this Agreement; provided that after such 5-year period, Schnitzer and DEQ shall provide the other sixty (60) days notice before destruction or other disposal of such records and make them available for inspection and copying.
4. Schnitzer may assert a claim of confidentiality regarding any documents or records submitted to or copied by DEQ pursuant to this Agreement. DEQ shall treat documents and records for which a claim of confidentiality has been made in accordance with ORS 192.410 through 192.505. If Schnitzer does not make a claim of confidentiality at the time the documents or records are submitted to or copied by DEQ, the documents or records may be made available to the public without notice to Schnitzer.

#### H. Progress Reports

During each quarter of this Agreement, Schnitzer shall deliver to DEQ on or before the fifteenth (15<sup>th</sup>) day following the end of the calendar quarter two (2) copies of a progress report containing the following items. DEQ anticipates that the progress report will not exceed 2 pages in length.

1. Actions taken under this Agreement during the previous quarter;
2. Actions scheduled to be taken in the next quarter;
3. Sampling, test results, and any other data generated by Schnitzer during the previous quarter; and
4. A description of any problems experienced during the previous quarter and the actions taken to resolve them.



## I. Other Applicable Laws

Subject to ORS 415.315(3), all actions under this Agreement shall be performed in accordance with all applicable federal, state, and local laws and regulations.

## J. Reimbursement of DEQ Oversight Costs

1. Prior to entry of this Agreement, DEQ shall submit to Schnitzer an estimate of costs incurred by DEQ to date for site assessment activities and preparation and negotiation of this Agreement. Upon entry of this Agreement, DEQ shall submit to Schnitzer a statement for costs actually and reasonably incurred by DEQ prior to entry of this Agreement for site assessment activities and preparation and negotiation of this Agreement and an estimate of future DEQ oversight costs associated with Schnitzer's implementation of this Agreement.
2. DEQ shall submit to Schnitzer a monthly statement of costs incurred after issuance of this Agreement by DEQ in connection with oversight of Schnitzer's implementation of this Agreement. Each invoice will include a summary of costs billed to date. DEQ's invoice for direct costs will include a direct labor summary showing the persons charging time, the amount of time, and the nature of the work performed.
3. DEQ or State of Oregon oversight costs payable by Schnitzer shall include both direct and indirect costs. Direct costs shall include site-specific expenses, DEQ contractor costs, and DEQ legal costs. Indirect costs shall include those general management and support costs of the DEQ and of the applicable administering division (e.g. Waste Prevention and Management Division, Environmental Cleanup Division, Northwest Region) that are allocable to DEQ oversight of this Agreement and not charged as direct, site-specific costs. Indirect costs shall be based on a percentage of direct personal services costs. DEQ oversight costs also shall include the surcharge required by ORS 465.333.
4. Within thirty (30) days of receipt of a DEQ statement, Schnitzer shall pay the amount of costs billed by check made payable to the "State of Oregon, Hazardous Substance Remedial Action Fund". Schnitzer shall pay simple interest of 9% per annum on the unpaid balance of any oversight costs, which interest shall begin to accrue at the end of the 30-day payment period.



**K. Force Majeure**

1. If any event occurs that is beyond Schnitzer's reasonable control and that causes or might cause a delay or deviation in performance of the requirements of this Agreement, Schnitzer shall promptly notify DEQ's Project Manager verbally of the cause of the delay or deviation and its anticipated duration, the measures that have been or will be taken to prevent or minimize the delay or deviation, and the timetable by which Schnitzer proposes to carry out such measures. Schnitzer shall confirm in writing this information within five (5) working days of the verbal notification.
2. If Schnitzer demonstrates to DEQ's satisfaction that the delay or deviation has been or will be caused by circumstances beyond the reasonable control and despite the due diligence of Schnitzer, DEQ shall extend times for performance of related activities under this Agreement as appropriate. Circumstances or events beyond Schnitzer's control might include but are not limited to acts of God, unforeseen strikes or work stoppages, fire, explosion, riot, sabotage, or war. Increased cost of performance or changed business or economic circumstances shall be presumed not to be circumstances beyond Schnitzer's reasonable control.

**L. Prior Approval**

Where DEQ review and approval is required for any plan or activity under this Agreement, Schnitzer shall not proceed to implement the plan or activity until DEQ approval is received. Any DEQ delay in granting or denying approval shall correspondingly extend the time for completion by Schnitzer. Prior approval shall not be required in emergencies where Schnitzer reasonably believes a delay in undertaking a particular action will threaten human health, safety, or the environment; provided that Schnitzer notifies DEQ of the emergency and action as soon as is practicable.

**M. Dispute Resolution**

In the event of disagreement between Schnitzer and DEQ regarding implementation of this Agreement, Schnitzer and DEQ shall, in the following order: 1) make a good faith effort to resolve the dispute between Project Managers; 2) if necessary, refer the dispute for resolution by the immediate supervisors of the Project Managers; 3) if necessary, provide each other their respective positions in writing and refer the dispute for resolution by DEQ's Administrator of the Waste Prevention and Management Division or the appropriate Region Administrator and



Schnitzer's (ADMINISTRATOR'S COUNTERPART); and 4) if necessary, refer the dispute for resolution by DEQ's Director and Schnitzer's (DIRECTOR'S COUNTERPART). DEQ's final decision after such dialogue shall be enforceable under this Agreement. The time required for dispute resolution shall correspondingly extend Schnitzer's schedule for all pending, affected deliverables or activities.

**N. Enforcement of Agreement and Reservation of Rights**

1. In the event of Schnitzer's failure to comply with this Agreement (including any failure to reimburse oversight costs), DEQ may enforce this Agreement as an order under ORS 465.260(5) or may terminate this Agreement after thirty (30) days written notice to Schnitzer.
2. In the event of DEQ's failure to provide oversight in accordance with this Agreement, Schnitzer may terminate this Agreement after thirty (30) days written notice to DEQ. Costs incurred or obligated by DEQ before the effective date of any termination of this Agreement shall be owed under the Agreement notwithstanding such termination.
3. Schnitzer does not admit any facts (including those recited herein), legal issues, liability, or violation of law by virtue of entering this Agreement.
4. Except as otherwise provided in Subsection II.O., nothing in this Agreement shall prevent Schnitzer from exercising any rights of contribution or indemnification Schnitzer might have against any person, including the State of Oregon, regarding the release(s) of hazardous substances that are the subject of this Agreement; provided Schnitzer waives any right it might have under ORS 465.260(7) to seek reimbursement from the Hazardous Substance Remedial Action Fund for costs incurred under this Agreement.
5. Schnitzer agrees not to litigate, in any proceeding brought by DEQ to enforce this Agreement, any issue other than Schnitzer's or DEQ's compliance with this Agreement.
6. In the event that the Schnitzer site becomes part of a federal National Priority List (NPL) site, DEQ agrees to cooperate with Schnitzer to encourage EPA to accept satisfactory and complete performance under this Agreement as fulfillment of Schnitzer's obligation to perform the same work under a subsequently issued EPA Order or Consent Decree. If EPA does not agree that such performance under this Agreement fulfills the EPA-imposed obligations, the Agreement



may be modified pursuant to Subsection II.Q. or terminated at the election of DEQ or Schnitzer. Notwithstanding the foregoing, if the Portland Harbor area becomes part of a federal NPL site, but (1) the Schnitzer site is not itself included in the area expressly covered by the NPL listing (e.g. the Harbor is listed but upland sites are not) or (2) DEQ remains the lead agency with respect to the Schnitzer site, this Agreement shall remain in full force and effect, however; if EPA orders any conflicting or overlapping activities, this Agreement shall be modified, as necessary, to prevent conflicting or duplicative obligations. Any other additional EPA-imposed obligations may be addressed by modification of this Agreement under Subsection II.Q. or by separate agreement or order.

**O. Hold Harmless**

1. Schnitzer shall save and hold harmless the State of Oregon and its commissions, agencies, officers, employees, contractors, and agents, and indemnify the foregoing, from and against any and all claims arising from acts or omissions related to this Agreement of Schnitzer or its officers, employees, contractors, agents, receivers, trustees, or assigns. DEQ shall not be considered a party to any contract made by Schnitzer or its agents in carrying out activities under this Agreement.
2. To the extent permitted by Article XI, Section 7, of the Oregon Constitution and by the Oregon Tort Claims Act, the State of Oregon shall save and hold harmless Schnitzer and its officers, employees, contractors, and agents, and indemnify the foregoing, from and against any and all claims arising from acts or omissions related to this Agreement of the State of Oregon or its commissions, agencies, officers, employees, contractors, or agents (except for acts approving or omissions constituting approval of any activity of Schnitzer under this Agreement). Schnitzer shall not be considered a party to any contract made by DEQ or its agents in carrying out activities under this Agreement.

**P. Parties Bound**

This Agreement shall be binding on the parties and their respective successors, agents, and assigns. The undersigned representative of each party certifies that he or she is fully authorized to execute and bind such party to this Agreement. No change in ownership or corporate or partnership status relating to the facility shall in any way alter Schnitzer's obligations under this Agreement, unless otherwise approved in writing by DEQ.



**Q. Modification**

DEQ and Schnitzer may modify this Agreement by mutual written agreement.

**R. Duration and Termination**

Upon completion of work under this Agreement, Schnitzer shall submit to DEQ a written notice of completion. This Agreement shall be deemed satisfied and terminated upon payment of all oversight costs owed and upon DEQ's issuance of a letter acknowledging satisfactory completion of activities in accordance with this Agreement. Such letter shall be issued within sixty (60) days of receipt of notice of completion evidencing satisfactory completion of activities in accordance with this Agreement and payment of outstanding DEQ oversight costs, or as soon thereafter as is reasonably practicable. In the event that DEQ is unable to issue such letter within sixty days of receipt of Schnitzer's written notice of completion, DEQ shall provide Schnitzer with a written schedule upon which DEQ anticipates review of Schnitzer's work and issuance of that letter.

**Schnitzer**

By: Tom Zelenka Date: June 5, 2000  
(Name)  
Manager-Legislative/Environmental and Public Affairs  
(Title)

**STATE OF OREGON  
DEPARTMENT OF ENVIRONMENTAL QUALITY**

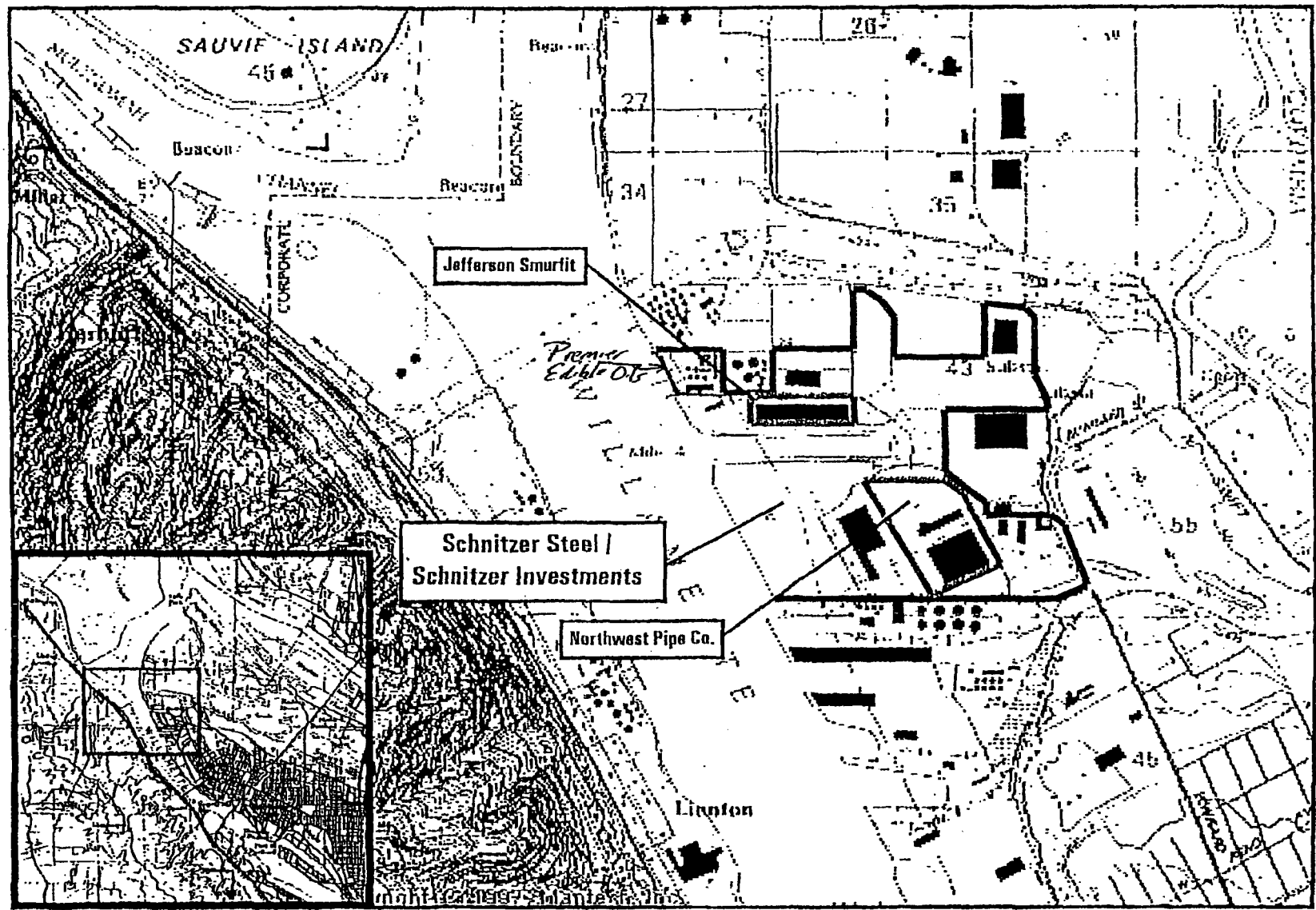
By: Neil Mullane Date: 6/13/2000  
(Name)  
Administrator NWR  
(Title)

KBB/GEN30415



Figure 1 Site Location

Attachment A





## ATTACHMENT B

### SCOPE OF WORK FOR REMEDIAL INVESTIGATION AND SOURCE CONTROL MEASURES

#### I. SCHEDULE

Respondent shall submit for DEQ review and approval Remedial Investigation (RI), Risk Assessment (RA), and Source Control Measures (SCM) work plans and reports which address all elements of this Scope of Work (SOW). Elements of the SOW may be addressed by alternative means or by using existing data or information to the extent that the data are applicable, meet the objectives of the RI, and are of acceptable QA/QC.

All work completed under this Agreement shall proceed in accordance with the schedule below:

RI Assessment Work Plan (if Respondent elects to perform a Pre-RI Assessment)	A Pre-RI Assessment Work Plan will be submitted to DEQ within 30 days of the issuance of this Agreement.
DEQ Review and Comment	To Respondent within 30 days of receipt of Pre-RI Assessment Work Plan.
Pre-RI Assessment Report	To be specified in Pre-RI Assessment Work Plan.
RI Proposal	An RI proposal will be submitted to DEQ within 30 days of issuance of this Agreement or, if a Pre-RI Assessment is performed and DEQ determines that an RI is necessary, based on the results of a Pre-RI Assessment, within 30 days of approval of the Pre-RI Assessment Report.
DEQ Review and Comment	To Respondent within 30 days of receipt of RI Proposal.
Draft RI Work Plan	To DEQ within 45 days of receipt of DEQ comments on RI Proposal.
DEQ Review and Comment	To Respondent within 30 days of receipt of draft RI Work Plan.
Final RI Work Plan	To DEQ within 30 days of receipt of DEQ comments on draft RI Work Plan.
Initiation of RI	To be specified in Project Management section of RI Work Plan.
Initiation of SCM	To be specified in Project Management section of RI Work Plan.



The schedule for additional deliverables specified in this SOW (e.g., Risk Assessment work plan, Remedial Investigation report, Risk Assessment report, and Source Control Measure work plan) should be specified in the Project Management Plan section of the RI work plan.

All work plans may be amended by Respondent as necessary to reflect or incorporate newly discovered information and/or environmental conditions. Additional work plans and work plan amendments are subject to DEQ review and approval and shall be processed according to schedules negotiated between the parties at the time of each phase change or task addition. Respondent shall initiate and complete work according to the schedule specified in the applicable approved work plan or amendment. Future schedules or deadlines for all submittals, work plans or other requirements shall be adjusted accordingly for the time necessary for preparation, approval and implementation of additional work plans, investigations and/or reports not contemplated in the original schedule and shall be approved by DEQ in writing.

## II. OBJECTIVES

Work performed under this Agreement shall complement and incorporate existing facility information with the following specific objectives. For purposes of this Scope of Work, the "facility" shall exclude that portion of the facility that is below the mean high-water mark of the Willamette River. The parties acknowledge that a separate Portland Harbor Sediment RI/FS is proceeding with respect to the portion of the Willamette River below the mean high-water mark, and it is not the purpose of this Scope of Work to duplicate any of that work:

- A. Identify and characterize all hazardous substance source areas at the Schnitzer facility. Source areas shall be characterized through a review of historical information and the collection of environmental samples for chemical, geotechnical, and other analyses. The evaluation of source areas shall focus on upland operations that may have resulted in a release of hazardous substances.
- B. Evaluate all contaminant migration pathways at the Schnitzer facility. Key elements relevant to contaminant migration include, but are not limited to, the rate and direction of groundwater flow, subsurface contaminant migration to the Willamette River, overland contaminant migration to the Willamette River, storm water discharge to the Willamette River, direct and indirect release to the Willamette River, preferential migration pathways, volatilization, dust entrainment, and riverbank seepage.
- C. Determine the nature, extent, and distribution of hazardous substances in affected media at the Schnitzer facility. This analysis should focus on the vertical and horizontal extent of source area contamination, groundwater contamination, and surface and subsurface soil contamination.



- D. Identify all current and reasonably likely future human and ecological receptors at the Schnitzer facility. Receptors shall include human and ecological receptors that may be exposed to hazardous substances at the facility. This analysis should consider all relevant contaminant migration pathways and the nature, extent and distribution of hazardous substances in affected media.
- E. Collect sufficient data and historical information to allow the identification of possible areas of sediment contamination adjacent to the Schnitzer facility. Areas of potential sediment contamination shall be characterized through the Portland Harbor Sediment RI/FS. Data collection and evaluation shall consider the potential for contaminant migration to the Willamette River and over or in-water releases of hazardous substances resulting from operations at the Schnitzer facility. Respondent may be required to perform limited sediment or benthic sampling adjacent to the facility as necessary to address an objective of this Scope of Work but will not be required to conduct sediment or benthic sampling that is duplicative of sampling under the Portland Harbor sediment RI/FS.
- F. Evaluate the risk to human health and the environment from releases of hazardous substances at or from the Schnitzer facility through the performance of human health and ecological risk assessments.
- G. Identify hot spots of contamination, if any, at the Schnitzer facility.
- H. Generate or use data of sufficient quality for site characterization and risk assessment at the Schnitzer facility.
- I. Develop the information necessary to evaluate and design necessary source control measures to address contaminant releases from the Schnitzer facility.
- J. Implement necessary source control measures to address contaminant releases from the Schnitzer facility.

### III. Pre-RI Assessment Work Plan and Report

Respondent may elect to perform a Pre-RI Assessment as the initial task under this Agreement. The primary purpose of the Pre-RI assessment is to determine which media and pathways (e.g., groundwater, surface water, air, and direct contact) are affected by site related hazardous substances. The Pre-RI Assessment will include a review of the facility history, review of current facility conditions, and may include focused sampling activities, to assess potential past and present sources of hazardous substances and determine if there has been a release from these sources to surface water or sediments, as appropriate.

If Respondent elects to perform a Pre-RI Assessment, Respondent shall submit a Pre-RI Assessment Work Plan for DEQ review and approval. The Pre-RI



Assessment Work Plan shall describe the objectives, deliverables, schedule, and specific tasks that will be performed for the Pre-RI Assessment. If the Pre-RI Assessment includes sampling, the work plan shall describe the sampling locations and the methodologies that will be used for the sampling and analysis.

The Pre-RI Assessment report will present the results of the Pre-RI Assessment including figures and tables presenting the results of any sampling and analysis. The report will present conclusions regarding the likelihood of past or present source(s) and pathway(s) for the release of hazardous substances to sediments adjacent to Respondent's facility and whether a re-evaluation of the priority of Respondent's facility is appropriate.

The results of the Pre-RI Assessment shall be used to determine whether further action is needed to assure protection of present and future public health, safety and welfare, or the environment. No further work shall be required under this Agreement and SOW if, based on historical information and the results of the Pre-RI Assessment or subsequent facility investigation, DEQ reasonably determines that there is no likely present source and pathway for the release of hazardous substances to surface water or sediments at or from Respondent's facility for which DEQ could require a removal action or remedial investigation under ORS 465.200 et seq. Further, should the pre-RI assessment or subsequent facility investigation provide enough information to re-evaluate the priority of the facility, Respondent may request that DEQ perform this evaluation. Should it be determined by DEQ that the facility no longer presents a high priority threat to present and future public health, safety, and welfare or the environment, no further RI work with respect to the uplands portions of the facility shall be required under this Agreement and SOW.

#### IV. REMEDIAL INVESTIGATION PROPOSAL

If DEQ determines that further RI work is required (or if Respondent elects not to perform a Pre-RI Assessment), Respondent shall prepare an RI proposal. The RI Proposal shall briefly discuss Respondent's proposed approach to the RI, addressing soil, groundwater, surface water, sediments, and air. The proposal will provide the framework for the RI Work Plan and will include at a minimum, a summary of data collected to date, a conceptual site model (including a conceptual site hydrogeologic model), a description of RI goals and objectives and an estimated schedule for completion of the RI. The RI proposal shall consider methodologies presented in the Portland Harbor Sediment Management Plan and the Portland Harbor Sediment Investigation Work Plan.

#### V. REMEDIAL INVESTIGATION WORK PLAN

The work plan shall be developed in accordance with applicable Oregon Administrative Rules (OAR 340-122-010 through -115), DEQ guidance, and the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, OSWER Directive 9355.3-01, 1988, as appropriate. Existing data may be used if it meets data quality objectives for the RI. The results of the



RI shall be utilized to guide data collection efforts performed as part of the Portland Harbor RI/FS Work Plan. The need for the RI Work Plan shall be evaluated based on the results of the pre-RI Assessment. The submitted work plan shall include, but not be limited to the following items:

**A. PROJECT MANAGEMENT PLAN**

The RI Work Plan shall include a proposed schedule for submittals and implementation of all proposed activities and phases pertaining to this scope of work (this schedule will include target dates for the submittal of a Risk Assessment work plan, and submittal of draft and final Remedial Investigation, and Risk Assessment reports); a description of the personnel (including subcontractors, if known) involved in the project, and their respective roles in the project; and a discussion of how variations from the approved work plan will be managed.

**B. SITE DESCRIPTION**

The RI work plan shall include a discussion of the current understanding of the physical setting of the facility and surrounding area; the facility history; hazardous substance and waste management history; facility operations conducted on, in, over or adjacent to the Willamette River and current facility conditions.

**C. SITE CHARACTERIZATION PLAN**

The Site Characterization plan shall be consistent with DEQ guidance and the requirements specified in OAR 340-122-080. The site characterization plan shall include, but not be limited to, characterization of the hazardous substances, characterization of the facility, identification of potential receptors and the collection and evaluation of information relevant to the identification of hot spots of contamination, and shall address the following:

**1. Soils**

**Objective:** To identify and characterize releases of hazardous substances from the facility to soils.

**Scope:** The plan shall supplement previous soil sampling at the facility. The plan shall address all areas of the facility which could potentially have received spills, leaks from tanks or piping, been used for waste treatment or disposal, or have been affected by contaminated surface water or storm water runoff, and all other areas of the facility where soil contamination is known or suspected.

**Procedures:** The plan shall be designed and conducted to determine the vertical and lateral extent of soil contamination, determine the extent to which soil contamination may contribute to



Willamette River sediment contamination, characterize the facility geology, determine the physical and chemical soil characteristics relevant to the RI, evaluate the potential for contaminant migration and gather the information necessary to identify hot spots of contamination. The plan shall include the proposed methodology for characterizing soil.

## 2. Groundwater

Objective: To identify and characterize releases of hazardous substances from the facility to groundwater.

Scope: The plan shall supplement previous investigations at the facility and shall identify and characterize all past, current and potential releases of hazardous substances to groundwater from the facility.

Procedures: The plan shall be designed and conducted to determine the vertical and lateral extent of groundwater contamination, both on and, if applicable, off-site; estimate the rate of contaminant flux to the Willamette River; determine the extent to which free phase product is migrating to the Willamette River; characterize the facility hydrogeology, determine the physical and chemical water bearing zone characteristics relevant to the RI; evaluate the potential for contaminant migration through groundwater; and gather the information necessary to identify hot spots of contamination. The plan shall include the proposed methodology for characterizing groundwater. Alternative methods for characterizing groundwater should be considered to accelerate the RI. Monitoring wells and other holes must be drilled, constructed and decommissioned in accordance with OAR Chapter 690, Division 240 and DEQ "Ground Water Monitoring Well, Drilling, Construction and Decommissioning" guidelines (DEQ 1992).

## 3. Surface Water

Objective: To identify and characterize releases of hazardous substances from the facility to surface water.

Scope: The plan shall supplement previous investigations at the facility and shall identify and characterize all past, current, and potential impacts to surface waters from the facility.

Procedures: The plan shall be designed to determine the extent to which surface water may have been impacted by releases of hazardous substances at the facility; determine the nature and extent of surface water contamination; characterize the facility hydrology; determine the physical and chemical surface water characteristics relevant to the RI including flow characteristics; evaluate the potential for contaminant migration and gather the information necessary to identify hot spots of contamination. The plan shall include the proposed methodology for characterizing surface water.



#### 4. Sediments

Objective: To identify and characterize releases of hazardous substances from the facility to sediments.

Scope: The plan shall supplement previous investigations at the facility, shall identify and characterize all past, current, and potential releases of hazardous substances to sediments from the facility in a manner consistent with the Portland Harbor Sediment RI/FS. Characterization of the nature and extent of sediment contamination shall not be subject to this Agreement, but is contemplated to be completed through the Portland Harbor Sediment RI/FS.

Procedures: The plan shall be designed to identify sources of sediment contamination from the facility, and characterize release mechanisms from the facility to sediments. The plan shall include the proposed methodology for characterizing releases to sediments and as applicable shall utilize methodologies presented in the Portland Harbor Sediment Management Plan and the Portland Harbor Sediment Remedial Investigation and Feasibility Study Work Plan.

#### 5. Air

Objective: To identify and characterize any unpermitted release of hazardous substances to the air, from soil, surface water, or groundwater contamination at the facility.

Scope: The plan shall supplement previous investigations at the facility and shall identify and characterize all past, current and potential releases (e.g. contaminated soil or groundwater) of hazardous substances to air.

Procedures: The plan shall include the proposed methodology for evaluating air emissions using appropriate emission calculations and/or a field sampling program. The plan shall be designed to delineate the nature and extent of contamination, characterize the site climatology, determine the physical and chemical air characteristics relevant to the RI, evaluate the potential for contaminant migration to the Willamette River and surrounding areas and gather the information necessary to identify hot spots of contamination.

#### 6. Identification of Current and Reasonably Likely Future Land and Water Use

Objective: To identify current and reasonably likely future land and water uses in the locality of the facility not including those of the Willamette River.

Scope: The plan shall be designed to identify current and reasonably likely future land and water uses for the purposes of



identifying hot spots of contamination and conducting the baseline human health and ecological risk assessments based on OAR 340-122-080, DEQ Guidance, and the Portland Harbor Sediment Management Plan.

Procedures: The plan shall include the proposed methodology for identifying current and reasonably likely future land and water uses in the locality of the facility.

**D. SAMPLING AND ANALYSIS PLAN (SAP)**

Objective: To adequately document all sampling and analysis procedures.

Scope: In preparation of the SAP, the following guidance documents shall be utilized: Data Quality Objectives for Remedial Response Activities, EPA/540/G-87/004 (OSWER Directive 9355.0-7B), March, 1987; Test Methods for Evaluating Solid Waste, SW-846; and A Compendium of Superfund Field Operations Methods, EPA/540/P-87/001 (OSWER Directive 9355.0-14), December, 1987. The SAP shall address all topics listed in Environmental Cleanup Division Policy #760.000, Quality Assurance Policy.

Procedures: The work plan shall include a sampling and analysis plan (SAP). The SAP shall include quality assurance and quality control (QA/QC) procedures for both field and lab procedures. The SAP shall be sufficiently detailed to function as a manual for field staff.

**E. HEALTH AND SAFETY PLAN (HASP)**

Objective: To establish policies and procedures to protect workers and the public from the potential hazards posed by a hazardous materials site.

Scope: The HASP portion of the work plan shall comply with 29 CFR 1910.120 and OAR Chapter 437, Division 2.

Procedures: The HASP shall include a description of risks related to RI activities, protective clothing and equipment, training, monitoring procedures, decontamination procedures and emergency response actions.

**F. MAPS**

The work plan shall include a map or maps of the facility, which clearly shows facility topography, on-site structures, waste disposal areas and proposed sampling locations.



## VI. EVALUATION AND IMPLEMENTATION OF SOURCE CONTROL MEASURES

Objective: To implement necessary source control measures to address contaminant migration to the Willamette River that warrants removal action under OAR 340-122-070.

Scope: The plan shall gather sufficient information to evaluate, design and implement necessary source control measures.

Procedures: The plan shall be designed to and conducted to characterize all release mechanisms to the Willamette River. Characterization data shall be adequate to evaluate, design and implement necessary source control measures. Source control measures shall address contaminant migration to the river through overland transport, storm water runoff, free phase product migration, direct release, and/or dissolved groundwater contaminant migration that warrant removal action under OAR 340-122-070.

Termination: Respondent's obligations with respect to any source control measures implemented under this SOW shall terminate upon implementation of a remedy or entry of a consent decree, unilateral order, or other order that requires remedial action with respect to the facility that effectively serves to control that source.

## VII. RISK ASSESSMENT WORK PLAN

### A. UPLAND HUMAN HEALTH RISK ASSESSMENT PLAN

Objective: To evaluate the collective demographic, geographic, physical, chemical, and biological factors at the facility, for the purposes of characterizing current or reasonably likely future risks to human health as a result of a threatened or actual release(s) of a hazardous substance at or from the facility; documenting the magnitude of the potential risk at the facility; supporting risk management decisions; and establishing remedial action goals if necessary.

Scope: The human health risk assessment shall evaluate risk in the context of current and reasonably likely future land and water uses and in the absence of any actions to control or mitigate these risks (i.e., under an assumption of no action). The human health risk assessment portion of the work plan shall be developed based on the requirements specified in OAR 340-122-084, DEQ guidance, and the Risk Assessment Guidance for Superfund - Human Health Evaluation Manual Part A, United States Environmental Protection Agency (EPA) Interim Final, July 1989 (RAGS-HHEM). A suggested outline for the human health evaluation is given in Exhibit 9-1 of the RAGS-HHEM. The work plan should use this outline as a framework for discussing the methodologies and assumptions to be used in assessing the potential human health risks at the facility.



Procedure: The plan shall describe the different tasks involved in preparing the human health risk assessment. The human health risk assessment can be completed using either deterministic or probabilistic methodologies. If probabilistic methodologies are to be used; then Respondent shall discuss risk protocol with DEQ before the commencement of a probabilistic risk assessment.

The upland human health risk assessment shall be designed to achieve the following:

1. Develop appropriate exposure units considering the nature, extent, and distribution of contamination and the reasonably likely future land and water use in the locality of the facility;
2. Establish data quality objectives for each exposure unit identified;
3. Collect data appropriate to satisfy the data quality objectives for each exposure unit;
4. Identify contaminants of interest for each media of concern;
5. Develop exposure scenarios based on current and reasonably likely land use, facility features and populations potentially exposed;
6. Identify appropriate exposure factors for all exposure pathways to be evaluated;
7. Identify the appropriate toxicity factors for all exposure pathways to be evaluated; and
8. Quantify the risks to human health at the facility.

#### **B. UPLAND ECOLOGICAL RISK ASSESSMENT PLAN**

Objective: To evaluate the collective demographic, geographic, physical, chemical, and biological factors at the facility, for the purposes of characterizing current or reasonably likely future risks to the environment as a result of a threatened or actual release(s) of a hazardous substance at or from the facility; quantifying the potential risk at a facility; supporting risk management decisions; and establishing remedial action goals if necessary.

Scope: The ecological risk assessment shall evaluate risk in the context of current and reasonably likely future land and water uses and in the absence of any actions to control or mitigate these risks (i.e., under an assumption of no action). The ecological risk assessment will use a tiered approach (with four levels) to produce a focused and cost-effective assessment of risk. The ecological risk assessment work plan shall be developed based on the requirements specified in rule under OAR 340-122-084 and DEQ guidance.

Procedure: The plan shall describe the different tasks involved in preparing the ecological risk assessment. Ecological risk assessments may include a level I scoping plan; a level II screening plan; a level III baseline plan; and a level IV field



baseline plan. The level III and level IV baseline plans shall include an exposure analysis, an ecological response analysis, a risk characterization and an uncertainty analysis as required by OAR 340-122-084(3). The ecological risk assessment can be completed using either deterministic or probabilistic methodologies. If probabilistic methodologies are to be used, then Respondent shall discuss risk protocol with DEQ before the commencement of a probabilistic risk assessment.

Terrestrial habitats and receptors shall be evaluated through the following approach:

1. Complete a Level I Scoping assessment per ODEQ guidance for the terrestrial portion of the facility.
2. Make a preliminary determination of locality of the facility with respect to terrestrial receptors and current and potential future exposure to facility-related contaminants.
3. Determine potential for presence/absence of terrestrial threatened or endangered species.

#### VIII. REPORTS

##### A. QUARTERLY REPORTS

Two (2) copies of the Quarterly Reports shall be submitted to DEQ by the 15th day of the quarter following the reporting period. The quarterly reports shall summarize activities performed, data results collected or received and problems encountered or resolved during the previous quarter and activities planned for the upcoming quarter.

##### B. REMEDIAL INVESTIGATION REPORT

The Remedial Investigation report shall follow the outline in Table 3-13 (page 3-30 - 3-31) in the CERCLA RI/FS guidance, as applicable, and address the items listed below:

1. Executive Summary.
2. Introduction.
3. Facility Background.

A discussion and supporting maps of facility operations, facility description, facility setting, and current and reasonably likely future land and water uses.

4. Study Area Investigation.

A discussion of the investigative procedures and results for soil, groundwater, surface water, sediments and air.

5. Summary and Conclusions.



A discussion of the nature, extent, distribution and environmental fate and transport of contaminants in soil, groundwater, surface water, sediments and air.

6. Appendices.

Detailed information supporting the results of the Remedial Investigation shall be submitted in the Appendices of the report.

C. **RISK ASSESSMENT REPORT**

1. Human Health Risk Assessment Report

The results of the human health risk assessment should follow DEQ risk assessment guidance for human health and RAGS-HHEM Part A.

2. Ecological Risk Assessment Report

The main sections of the ecological risk assessment report should follow specific DEQ guidance for report formats at each level (I-III).

D. **REPORT DISTRIBUTION.**

1. Three (3) bound copies and one (1) unbound copy of all reports should be submitted to DEQ.
2. DEQ requests that all copies be duplex printed on recycled paper.





BRIDGEWATER GROUP, INC.

M.C.I.B.

## Phase I RI Conclusions Burgard Industrial Park

TO: Alicia Voss/DEQ  
COPY: Mat Cusma/Schnitzer  
FROM: Ross Rieke/Bridgewater Group  
DATE: August 8, 2002

RECEIVED  
STOEL RIVES LLP  
By CU 8/12/02

This memorandum presents conclusions of the Phase I Remedial Investigation (RI) at the Burgard Industrial Park in Portland, Oregon. The results of the Phase I RI are presented in a May 16, 2002, *Phase I Remedial Investigation Report*. This memorandum discusses the results relative to the potential pathways from each Feature of Concern (FOC) assessed in the Phase I RI to the Willamette River. The FOCs and pathways were assessed through the Phase I RI sampling and analysis in accordance with the October 29, 2001, Phase I RI Work Plan, which was approved by DEQ in a November 1, 2001, email.

The specific FOCs addressed by the Phase I RI were:

- Former Northwest Oil Company Oil Tanks
- Former Shipyard Sanitary Sewer and Storm Water Discharges
- Former Shipyard Shipways
- ASR Staging Area
- Southeast Area
- Outfall 1 Plug Area

The Phase I RI also included an assessment of the storm water discharge areas. A catch basin soil sample was also collected in the Northwest Pipe area in the Southeast Area.

### ***Former Northwest Oil Company Tanks***

As noted in the Phase I RI Work Plan, any releases that may have occurred from the former Northwest Oil Tanks would have occurred below the current ground surface. Dredge fill has been placed over this area since the tanks were removed in the early 1940s. Thus, migration of contaminants from surface soils to the river, either through surface water or air, is not a relevant contaminant migration pathway for this FOC.

Groundwater samples from monitoring wells MW-1 and MW-2 and push probe PP-5 assessed the groundwater in the area of, and down gradient from, the Former Northwest Oil Company tanks. PCBs and semi-volatile organic compounds (SVOCs), including PAHs, were not detected in any of the groundwater samples from the area of the Former Northwest Oil Company tanks. Tetrachloroethene (PCE) was detected in a groundwater sample from MW-1, located near the center of the Former Northwest Oil Tanks area, at a concentration exceeding the EPA ambient water quality criteria. It is our understanding that



RECEIVED  
STOEL RIVES LLP  
By Dec 8/12/02

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# Enhanced Best Management Practices Storm Water Source Control Plan

Burgard Industrial Park  
12005 North Burgard Road  
Portland, Oregon

*Prepared for*  
Schnitzer Investment Corp.

August 8, 2002



SCHN00273760



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# Phase I Remedial Investigation Data Report

Burgard Industrial Park  
12005 North Burgard Road  
Portland, Oregon

*Prepared for*  
Schnitzer Investment Corp.

May 16, 2002



BRIDGEWATER GROUP, INC.

SCHN00273761





BRIDGEWATER GROUP, INC.

SSJ  
12/21  
Reports Submitted  
to agency

## Storm Drain Outfall Sampling and Analysis Plan Burgard Industrial Park

TO: Alicia Voss/DEQ  
COPY: Mat Cusma/Schnitzer  
FROM: Ross Rieke/Bridgewater Group  
DATE: January 11, 2002

This memorandum presents the sampling and analysis program for the storm drain outfalls at the Burgard Industrial Park in Portland, Oregon. The storm drain outfalls sampling and analysis program is based on Section 5.2.8 of the October 29, 2001, *Phase I Remedial Investigation Work Plan*, for the Burgard Industrial Park and the results of the storm drain outfall assessment presented below.

### Criteria for Storm Drain Outfall Sampling

As specified in Section 5.2.8 of the Phase I RI Work Plan, soil samples will be collected from beneath storm drain outfalls where such samples are representative of current or historical storm water discharges. As also specified in the work plan, the representativeness of soil samples from below the outfall discharge points is based on the following:

- Elevation of the shoreline at the discharge point. If the shoreline elevation at the point of discharge is below the ordinary high water line, the soil sample would not be representative of discharges from the outfall.
- Nature of the material on which the discharge falls. Representative samples cannot be collected from concrete and rip rap surfaces.
- Current and historical activities in the area around the discharge point. If significant shoreline grading activities have occurred around the discharge point, shoreline soil samples would not be representative of historical outfall discharges.

Soil samples are to be collected at outfalls where representative samples can be obtained in accordance with the above criteria.

### Storm Drain Outfall Assessment

A survey of the storm drain outfalls was performed on January 4, 2002 to assess the outfalls against the above three criteria. Each of the outfalls was observed and measurements taken to determine the elevation of where the discharge strikes the ground surface. The surface condition where the discharge strikes the ground surface was also observed. Table 1 presents the results of the outfall assessment.

As noted on Table 1, Outfall 7 meets the three criteria and, thus, a soil sample from where Outfall 7 discharges on to the ground is likely representative of current or past discharges



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# Phase I Remedial Investigation Work Plan

Burgard Industrial Park  
12005 North Burgard Road  
Portland, Oregon

*Prepared for*  
Schnitzer Investment Corp.

October 29, 2001



SCHN00273763



DRAFT

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# Phase I Remedial Investigation Work Plan

Burgard Industrial Park  
12005 North Burgard Road  
Portland, Oregon

*Prepared for*  
Schnitzer Investment Corp.

July 23, 2001



BRIDGEWATER GROUP, INC.

SCHN00273764



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# Remedial Investigation Proposal

Burgard Industrial Park  
12005 North Burgard Road  
Portland, Oregon

*Prepared for*  
Schnitzer Investment Corp.

May 7, 2001



SCHN00273765



DRAFT

SSI  
1721  
Final Report  
given to  
agency

# Pre-RI Assessment Report

Burgard Industrial Park  
12005 North Burgard Road  
Portland, Oregon

*Prepared for*  
Schnitzer Investment Corp.

February 28, 2001



BRIDGEWATER GROUP, INC.

**RECEIVED**  
STOEL RIVES LLP  
By ac 3/5/01

SCHN00273766



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# Storm Water System Assessment

Burgard Industrial Park  
12005 North Burgard Road  
Portland, Oregon

*Prepared for*  
Schnitzer Investment Corp.

December 21, 2000



BRIDGEWATER GROUP, INC.

SCHN00273767



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# Current Site Conditions Assessment

Burgard Industrial Park  
12005 North Burgard Road  
Portland, Oregon

*Prepared for*  
Schnitzer Investment Corp.

November 1, 2000



BRIDGEWATER GROUP, INC.

SCHN00273768



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# Site History Review

Burgard Industrial Park  
12005 North Burgard Road  
Portland, Oregon

*Prepared for*  
Schnitzer Investment Corp.

September 25, 2000



BRIDGEWATER GROUP, INC.

SCHN00273769



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# Pre-RI Assessment Work Plan

Burgard Industrial Park  
12005 North Burgard Road  
Portland, Oregon

*Prepared for*  
Schnitzer Investment Corp.

July 17, 2000

BRIDGEWATER GROUP, INC.

SCHN00273770



Oct-31-2000 10:01am

From: SCHNITZER JEL

5032862277

T-363

P.002/002

F-885

C. Bruce Ward  
Chairman of the Board

Gunderson Inc.  
4350 NW Front Avenue  
Portland, Oregon 97210

October 16, 2000

Mr. Robert Philip  
Schnitzer Steel Industries, Inc.  
P.O. Box 1047  
Portland, OR 97295

RE: Gunderson Front Avenue Property

Dear Bob:

Following up on your recent conversation with Bill Furman, Gunderson, Inc. owns and operates property at 4350 NW Front Avenue in Portland. Prior to the early 1980's, the southeastern part of the property (Tax Lot 57) was owned and operated by Schnitzer entities: American Ship Dismantlers operated at 4012 NW Front Avenue and Schnitzer Steel operated at 4250 NW Front Avenue. Since the lots were combined into single ownership, Gunderson and its predecessor have used this property primarily for materials storage.

This property borders the proposed Portland Harbor Superfund site. The Oregon Department of Environmental Quality has asked Gunderson to investigate the former Schnitzer owned portion of its property in order to determine whether it is a current or a former source of sediment contamination. DEQ has expressed a specific interest in the former activities of American Ship Dismantlers. However, there is some evidence that past auto wrecking activities may have also contributed to contamination on the site. At DEQ's request, Gunderson is about to embark on a preliminary site assessment of this portion of its property. I would like Schnitzer to have the opportunity to participate in this assessment since it appears that the results of the assessment will likely demonstrate that any environmental contamination occurred before Gunderson began operations at the property.

Please call me (or Gunderson's President, Tom Sass), so that we can develop a suitable mechanism for Schnitzer's participation in the process.

Sincerely,

*Bruce*

Bruce Ward

cc: William Furman

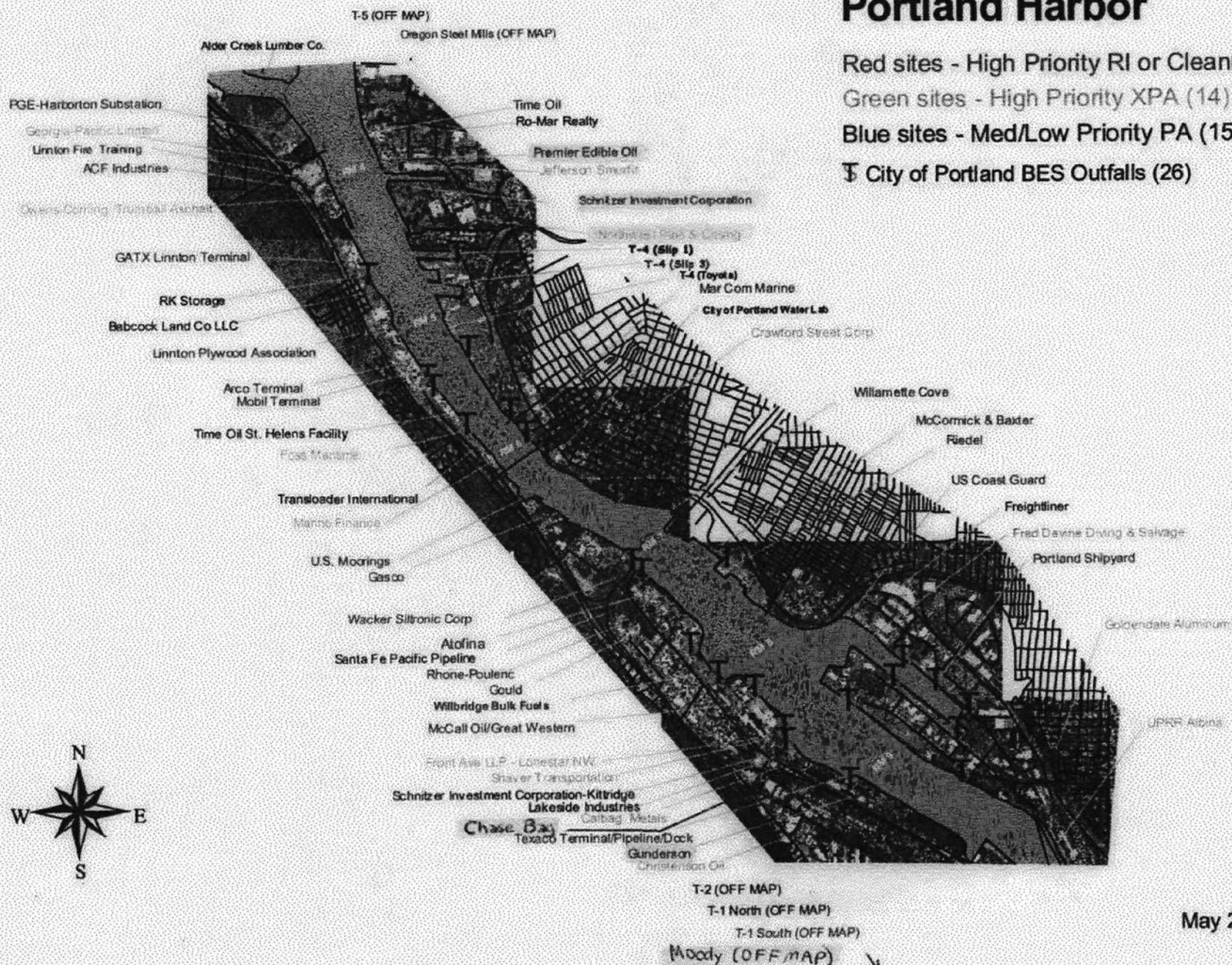
Tom Sass

SCHN00273783



# Upland Cleanup Sites Portland Harbor

Red sites - High Priority RI or Cleanup (29)  
 Green sites - High Priority XPA (14)  
 Blue sites - Med/Low Priority PA (15)  
 T City of Portland BES Outfalls (26)



May 2001

SCHN00274180

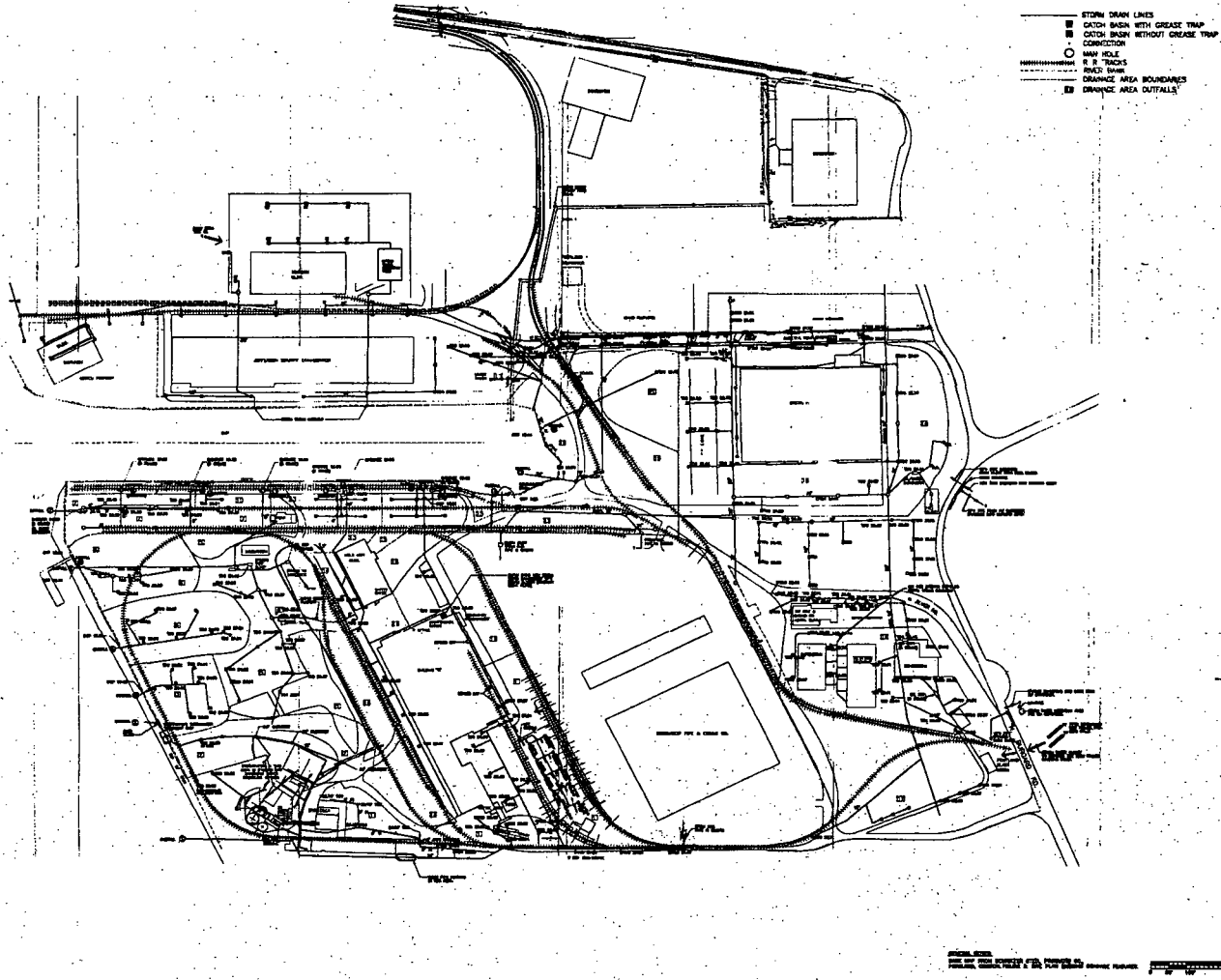


**Drawing 1**  
**Site Storm Water System Layout**

SCHN00274339



Contains Information Required for Professional Engineer  
 Public-Use Available Under Request



PARK  
 STADIUM  
 STADIUM

THE STORM WATER SYSTEM LAYOUT

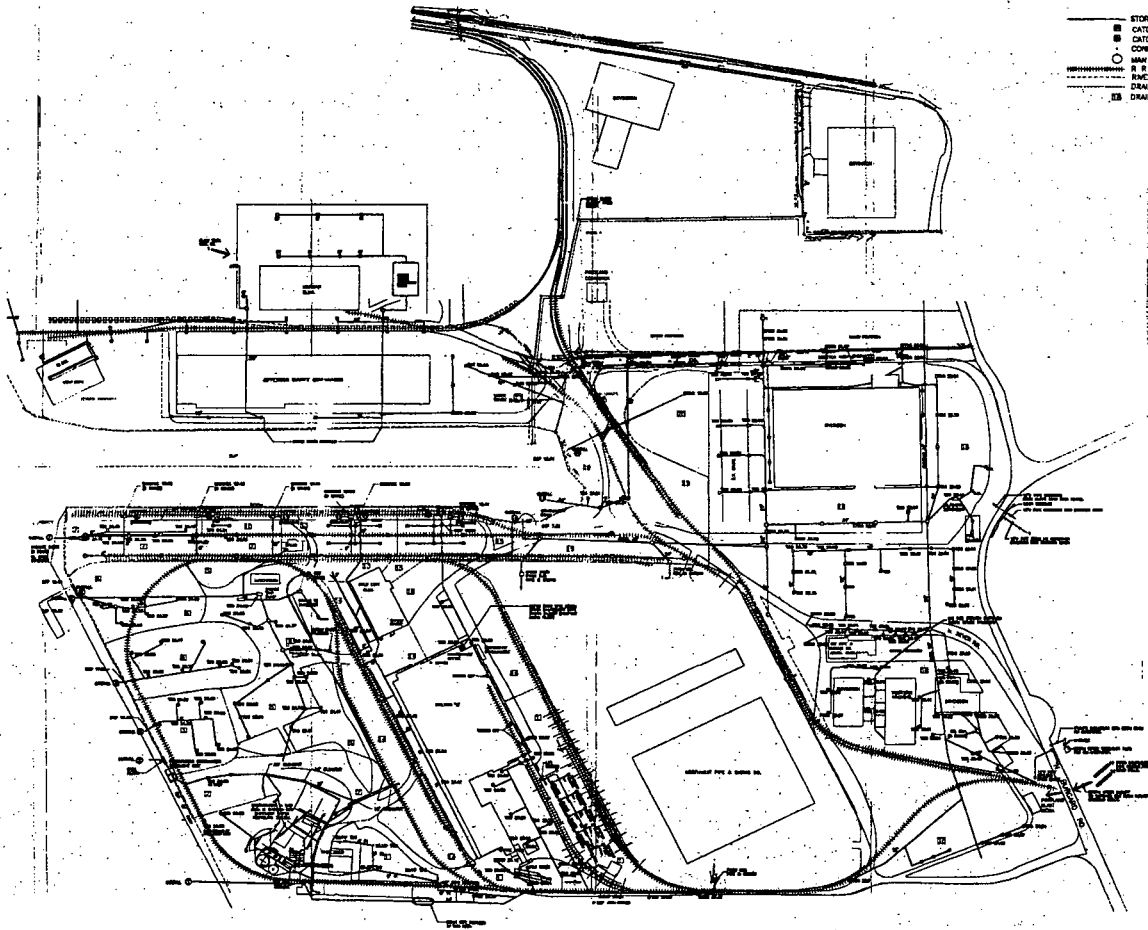
Scale: 1" = 100'

80-100271340



**Drawing 1**  
**Site Storm Water System Layout**





- STORM DRAIN LINES
- CATCH BASIN WITH GREASE TRAP
- CATCH BASIN WITHOUT GREASE TRAP
- CONNECTION
- MANHOLE
- R/S TRACKS
- RIVER BANK
- DRAINAGE AREA BOUNDARIES
- DRAINAGE AREA OUTFALLS



**BAROARD INDUSTRIAL PARK**  
 PRELIMINARY LAYOUT

**SITE STORM WATER SYSTEM LAYOUT**

Drawing No.	1
Scale	1" = 100'-0"
Date	12/10/07
Project No.	07-001-01





## **ATTACHMENT 1**

**SCHN00274451**

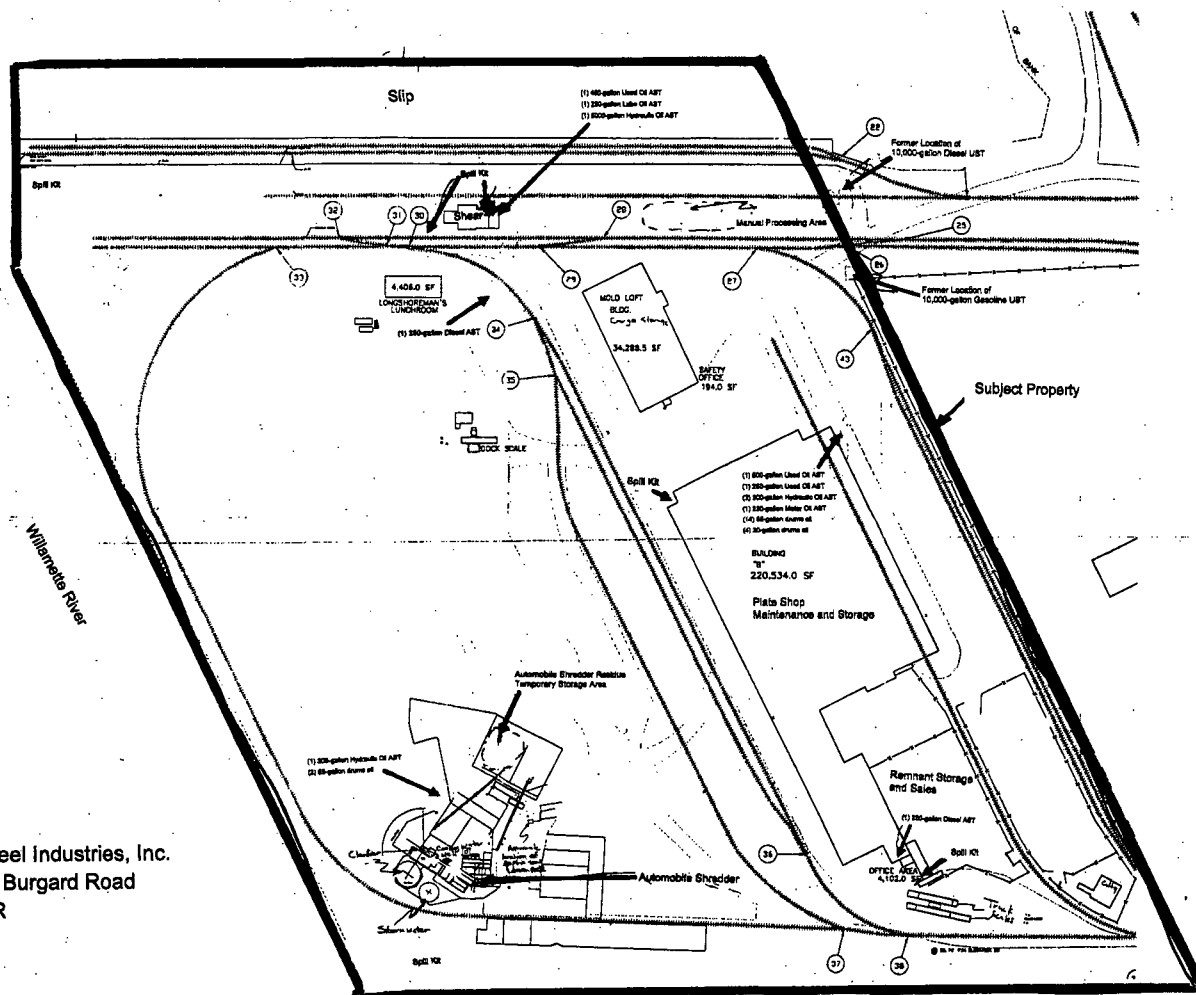


## **ATTACHMENT 2**

SCHN00274453



Schnitzer Steel Industries, Inc.  
12005 West Burgard Road  
Portland, OR





## **ATTACHMENT 3**

**SCHN00274455**



Due Date: NOVEMBER 30, 1998

1997-1998

Facility ID Numbr  
004297

OREGON STATE FIRE MARSHAL

HAZARDOUS SUBSTANCE INFORMATION SURVEY

PLEASE TYPE OR PRINT ONLY CHANGES OR ADDITIONS IN THE [BRACKETED] AREAS TO THE RIGHT OR BELOW THE PREPRINTED DATA.

SECTION A HAZARDOUS SUBSTANCE PRESENCE Check the correct box to the left.

- ☒ YES ☐ NO Are there hazardous substances present at this site in reportable quantities?  
If yes, complete sections A, B, C, and D. If no, complete sections A, B and C.  
A hazardous substance is any substance for which a Material Safety Data Sheet (MSDS) is required. If a previously reported substance is no longer present, see instructions for Section A.
- ☐ YES ☒ NO Are there Extremely Hazardous Substances (EHS) at this site that meet the threshold planning quantities?
- ☐ YES ☒ NO Is this facility subject to the reporting requirements of Section 112(r) of the Clean Air Act?

SECTION B DEMOGRAPHIC DATA Complete, correct or add information in the [bracketed] areas.

1. SIC CODE 1: 5093 DEFINITION: SCRAP & WASTE MATERIALS-WHOLESA
2. SIC CODE 2: DEFINITION:
3. BUSINESS ACTIVITY:  
SCRAP METAL RECYCLING
4. DUN & BRADSTREET #:
5. MANAGER'S NAME: TIMOTHY TODD
6. SEND TO ATTENTION OF: Timothy Todd
7. E-MAIL ADDRESS:
8. BUSINESS NAME: SCHNITZER STEEL PRODUCTS
9. DEPT OR DIV: INTERNATIONAL TERMINALS
10. SITE ADDRESS:  
2005 N BURGARD  
CITY: PORTLAND  
COUNTY: MULTNOMAH  
STATE: OR ZIP CODE: 97203
11. MAILING ADDRESS:  
PO BOX 10047  
CITY: PORTLAND  
COUNTY: MULTNOMAH  
STATE: OR ZIP CODE: 97296-0047
12. BUSINESS PHONE: 503-286-6903
13. NUMBER OF EMPLOYEES AT THIS SITE: 740
14. EMERGENCY ASSISTANCE CONTACT PERSON FOR THIS SITE: DAVE A AYDELOTT
15. EMERGENCY CONTACT PHONES:  
DAY 503-286-5771 NIGHT 206-573-83
16. RESPONSIBLE FIRE DEPARTMENT: PORTLAND FIRE BUREAU

SPECIAL FIRE DEPARTMENT INFORMATION This section is for information the fire service needs to know in case of an emergency.

17. ☐ YES ☒ NO WRITTEN EMERGENCY PLAN. IF YES, LOCATION:
18. ☒ YES ☐ NO AUTOMATIC FIRE SUPPRESSION SYSTEM PRESENT; e.g., sprinklered, halon system, etc.
19. ☒ YES ☐ NO ARE STORAGE BUILDINGS/TANKS/AREAS PLACARDED ACCORDING TO NFPA 704?
20. ☒ YES ☐ NO ARE OTHER TYPES OF PLACARDS USED?

SECTION C PERSON COMPLETING FORM

This person will be contacted to answer any questions needing clarification.

1. PRINT NAME: Timothy Todd
2. SIGNATURE (REQUIRED): Timothy Todd
3. DATE SURVEY COMPLETED: 11/24/98

SCHNITZER STEEL PRODUCTS  
INTERNATIONAL TERMINALS  
PO BOX 10047  
PORTLAND OR 97296-0047

RETAIN A COPY OF THIS SURVEY FOR 3 YEARS

SCHN00274456



## HAZARDOUS SUBSTANCE INFORMATION SURVEY

004297

## SECTION D

SUBSTANCE INFORMATION - TYPE OR PRINT ONLY CHANGES IN THE [BRACKETED] AREAS

COMMON NAME/TRADE NAME: ACETYLENE

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION: ACETYLENE

<input type="checkbox"/> EHS <input type="checkbox"/> 11207	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
<input checked="" type="checkbox"/> 1 - PURE	3	3	11	11			365	L 2 4	2.1 6.3	0000074-86
<input type="checkbox"/> 2 - MIXTURE										
<input type="checkbox"/> 1 - NEW					20	00				
<input type="checkbox"/> 2 - NO LONGER REPORTABLE										
STORAGE LOCATIONS AT SITE 1-NE SIDE OF BLDG B - 2-BLDG N SHREDDER - 3-BLDG L SHEAR										UN/NA NO. (IF KNOWN)
										1001

COMMON NAME/TRADE NAME: ANTIFREEZE

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION: ETHYLENE GLYCOL

<input type="checkbox"/> EHS <input type="checkbox"/> 11207	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
<input checked="" type="checkbox"/> 2 - MIXTURE	2	2	10	11			365	D 1 4	6.3	0000107-21
<input type="checkbox"/> 1 - PURE										
<input type="checkbox"/> 1 - NEW										
<input type="checkbox"/> 2 - NO LONGER REPORTABLE										
STORAGE LOCATIONS AT SITE BLDG B-NE SIDE										UN/NA NO. (IF KNOWN)
										3082

COMMON NAME/TRADE NAME: BLUE SHIELD

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION: ARGON

<input type="checkbox"/> EHS <input type="checkbox"/> 11207	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
<input checked="" type="checkbox"/> 1 - PURE	3	3	10	11			365	L 2 4	2.2 0	0007440-37
<input type="checkbox"/> 2 - MIXTURE										
<input type="checkbox"/> 1 - NEW					21	00				
<input type="checkbox"/> 2 - NO LONGER REPORTABLE										
STORAGE LOCATIONS AT SITE BLDG B-NE SIDE										UN/NA NO. (IF KNOWN)
										1956

COMMON NAME/TRADE NAME: CARBON DIOXIDE

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION: CARBON DIOXIDE

<input type="checkbox"/> EHS <input type="checkbox"/> 11207	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
<input checked="" type="checkbox"/> 1 - PURE	2	2	11	11			365	L 2 4	2.2	0000124-38
<input type="checkbox"/> 2 - MIXTURE										
<input type="checkbox"/> 1 - NEW					20	00				
<input type="checkbox"/> 2 - NO LONGER REPORTABLE										
STORAGE LOCATIONS AT SITE BLDG B-NE SIDE										UN/NA NO. (IF KNOWN)
										1013

SCHN00274457



## SECTION D

MMON NAME/TRADE NAME: DIESEL FUEL

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION: PETROLEUM MID-DISTILLATES

<input type="checkbox"/> EHS <input type="checkbox"/> 112(r)	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
	2 1 - PURE 2 - MIXTURE [ ]	2	30	30	[41]	[40]	365	B 1 4	3.3 6.4	0068334-30-
<input type="checkbox"/> 1 - NEW <input type="checkbox"/> 2 - NO LONGER REPORTABLE	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	UN/NA NO. (IF KNOWN)
STORAGE LOCATIONS AT SITE EAST SIDE OF RYERSON WARHOU										1993
-FUEL DEPOT										

MMON NAME/TRADE NAME: GASOLINE

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION: PETROLEUM DISTILLATES

<input type="checkbox"/> EHS <input type="checkbox"/> 112(r)	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
	2 1 - PURE 2 - MIXTURE [ ]	2	21	30	[31]	[30]	365	B 1 4	3.1 6.3	0008006-61-
<input type="checkbox"/> 1 - NEW <input type="checkbox"/> 2 - NO LONGER REPORTABLE	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	UN/NA NO. (IF KNOWN)
STORAGE LOCATIONS AT SITE EAST SIDE OF RYERSON WAREHOU										1203
E-FUEL DEPOT										

MMON NAME/TRADE NAME: GEAR OIL

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION: SEVERELY REFINED PETROLEUM DISTILLATES

<input type="checkbox"/> EHS <input type="checkbox"/> 112(r)	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
	2 1 - PURE 2 - MIXTURE [ ]	2	10	11	[21]	[10]	365	A 1 4	4.5	0064742-52-
<input type="checkbox"/> 1 - NEW <input type="checkbox"/> 2 - NO LONGER REPORTABLE	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	UN/NA NO. (IF KNOWN)
STORAGE LOCATIONS AT SITE 1-BLDG B NE SIDE OUTDOORS										1270

MMON NAME/TRADE NAME: GREASE

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION: SEVERELY REFINED PETROLEUM DISTILLATE

<input type="checkbox"/> EHS <input type="checkbox"/> 112(r)	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
	2 1 - PURE 2 - MIXTURE [ ]	1	11	20	[20]	[00]	365	D 1 4	4.5	0064742-52-
<input type="checkbox"/> 1 - NEW <input type="checkbox"/> 2 - NO LONGER REPORTABLE	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	UN/NA NO. (IF KNOWN)
STORAGE LOCATIONS AT SITE BLDG B NE SIDE - BLDG N SHRE										1255
DER - SW BLDG K AND STORAGE SHED										



## HAZARDOUS SUBSTANCE INFORMATION SURVEY

004297

## SECTION D

SUBSTANCE INFORMATION - TYPE OR PRINT ONLY CHANGES IN THE [BRACKETED] AREAS

COMMON NAME/TRADE NAME: HYDRAULIC OIL

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION: HIGHLY REFINED BASE LUBRICATING OILS

<input type="checkbox"/> EHS <input type="checkbox"/> 112(f)	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
	1 - PURE 2 - MIXTURE [ ]	2	21	21	[30]	[30]	365	A 1 4	4.5	0064742-65-
<input type="checkbox"/> 1 - NEW <input type="checkbox"/> 2 - NO LONGER REPORTABLE	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	UN/NA NO. (IF KNOWN)
STORAGE LOCATIONS AT SITE										1270

BLDG B NE SIDE/BLDG N SHREDD  
R/SW OF BLDG K/STORAGE SHED/BLDG L TOP OF BLD  
6 INSIDE E END OF BLDG

COMMON NAME/TRADE NAME: MOTOR OIL

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION: HIGHLY REFINED BASE OILS

<input type="checkbox"/> EHS <input type="checkbox"/> 112(f)	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
	1 - PURE 2 - MIXTURE [ ]	2	11	20	[2]	[2]	365	B 1 4	4.5	0064742-54-
<input type="checkbox"/> 1 - NEW <input type="checkbox"/> 2 - NO LONGER REPORTABLE	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	UN/NA NO. (IF KNOWN)
STORAGE LOCATIONS AT SITE										1270

BLDG B NE SIDE / SW OF BLDG  
/ STORAGE SHED

COMMON NAME/TRADE NAME: OXYGEN LIQUID

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION: OXYGEN

<input type="checkbox"/> EHS <input type="checkbox"/> 112(f)	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
	1 - PURE 2 - MIXTURE [ ]	3	20	21	[40]	[60]	365	A 2 7	2.2 5.1	0007782-44-
<input type="checkbox"/> 1 - NEW <input type="checkbox"/> 2 - NO LONGER REPORTABLE	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	UN/NA NO. (IF KNOWN)
STORAGE LOCATIONS AT SITE										1073

1 EAST SIDE BUILDING B - 2 N  
OF BUILDING B

COMMON NAME/TRADE NAME: PAINT

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION: PETROLEUM DISTILLATES

<input type="checkbox"/> EHS <input type="checkbox"/> 112(f)	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
	1 - PURE 2 - MIXTURE [ ]	2	10	10	[2]	[00]	365	D 1 4 F 1 4	3.3 6.3	0064742-47-
<input type="checkbox"/> 1 - NEW <input type="checkbox"/> 2 - NO LONGER REPORTABLE	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	UN/NA NO. (IF KNOWN)
STORAGE LOCATIONS AT SITE										1263

BLDG B NW INSIDE BLDG (TOOL  
ROOM)

SCHN00274459



CHEMICAL

1991-1996 OREGON STATE FIRE MARSHAL

## HAZARDOUS SUBSTANCE INFORMATION SURVEY

004297

SECTION D

SUBSTANCE INFORMATION - TYPE OR PRINT ONLY CHANGES IN THE [BRACKETED] AREAS

COMMON NAME/TRADE NAME: SOLVENT GW 350B

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION: PARAFFIN HYDROCARBON

<input type="checkbox"/> EHS <input type="checkbox"/> 112(c)	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
	2	2	03	04	20	00	365	0 1 4	4.5 0	0008002-74
1 - PURE 2 - MIXTURE										
1 - NEW 2 - NO LONGER REPORTABLE										
STORAGE LOCATIONS AT SITE BLDG 8										
UN/NA NO. (IF KNOWN)										
0000										

COMMON NAME/TRADE NAME: WASTE OIL

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION: PETROLEUM HYDROCARBON

<input type="checkbox"/> EHS <input type="checkbox"/> 112(c)	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
	2	2	10	20	00	2	365	A 1 4	4.5 6.4	0064742-54
1 - PURE 2 - MIXTURE										
1 - NEW 2 - NO LONGER REPORTABLE										
STORAGE LOCATIONS AT SITE BLDG 8 NE SIDE										
UN/NA NO. (IF KNOWN)										
9189										

COMMON NAME/TRADE NAME:

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION:

<input type="checkbox"/> EHS <input type="checkbox"/> 112(c)	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
1 - PURE 2 - MIXTURE										
1 - NEW 2 - NO LONGER REPORTABLE										
STORAGE LOCATIONS AT SITE										
UN/NA NO. (IF KNOWN)										

COMMON NAME/TRADE NAME:

HAZARDOUS INGREDIENT

HIGHEST CONCENTRATION:

<input type="checkbox"/> EHS <input type="checkbox"/> 112(c)	PHYSICAL STATE USE TABLE I	UNIT OF MEASURE USE TABLE II	AVG. AMT. CODE USE TABLE III	MAX. AMT. CODE USE TABLE III	AMT. IN CODE USE TABLE III	AMT. OUT CODE USE TABLE III	NUMBER OF DAYS ON SITE 3 DIGIT NO.	STORAGE CODE USE TABLES IV & V	HAZARD CLASSES USE TABLE VI	CAS NO. (IF KNOWN)
1 - PURE 2 - MIXTURE										
1 - NEW 2 - NO LONGER REPORTABLE										
STORAGE LOCATIONS AT SITE										
UN/NA NO. (IF KNOWN)										

SCHN00274460



Due Date: NOVEMBER 30, 1998

1997-1998

Facility ID Num  
013054

OREGON STATE FIRE MARSHAL

HAZARDOUS SUBSTANCE INFORMATION SURVEY

PLEASE TYPE OR PRINT ONLY CHANGES OR ADDITIONS IN THE [BRACKETED] AREAS TO THE RIGHT OR BELOW THE PREPRINTED DATA

SECTION A HAZARDOUS SUBSTANCE PRESENCE Check the correct box to the left.

- ☐ YES ☒ NO Are there hazardous substances present at this site in reportable quantities?  
If yes, complete sections A, B, C, and D. If no, complete sections A, B and C.  
A hazardous substance is any substance for which a Material Safety Data Sheet (MSDS) is required. If a previously reported substance is no longer present, see instructions for Section A.
- ☐ YES ☒ NO Are there Extremely Hazardous Substances (EHS) at this site that meet the threshold planning quantities?
- ☐ YES ☒ NO Is this facility subject to the reporting requirements of Section 112(r) of the Clean Air Act?

SECTION B DEMOGRAPHIC DATA Complete, correct or add information in the [bracketed] areas.

1. SIC CODE 1: 5093 DEFINITION: SCRAP & WASTE MATERIALS-WHOLESA

2. SIC CODE 2: DEFINITION:

3. BUSINESS ACTIVITY:

OFFICE

4. DUN & BRADSTREET #:

5. MANAGER'S NAME: TIMOTHY TODD

6. SEND TO ATTENTION OF:

7. E-MAIL ADDRESS:

8. BUSINESS NAME: SCHNITZER STEEL IND INC

9. DEPT OR DIV:

10. SITE ADDRESS:

3200 NW YEON AVE

11. MAILING ADDRESS:

PO BOX 10047

CITY: PORTLAND

CITY: PORTLAND

COUNTY: MULTNOMAH

COUNTY: MULTNOMAH

STATE: OR

ZIP CODE: 97210

STATE: OR

ZIP CODE: 97210-1524

12. BUSINESS PHONE: 503-224-9900

13. NUMBER OF EMPLOYEES AT THIS SITE: 50

14. EMERGENCY ASSISTANCE CONTACT PERSON FOR THIS SITE: LARRY WALTERS

15. EMERGENCY CONTACT PHONES:  
DAY 503-224-9900 NIGHT 503-320-39

16. RESPONSIBLE FIRE DEPARTMENT: PORTLAND FIRE BUREAU

SPECIAL FIRE DEPARTMENT INFORMATION

This section is for information the fire service needs to know in case of an emergency.

17. ☐ YES ☒ NO WRITTEN EMERGENCY PLAN. IF YES, LOCATION:
18. ☐ YES ☒ NO AUTOMATIC FIRE SUPPRESSION SYSTEM PRESENT; e.g., sprinklered, halon system, etc.
19. ☐ YES ☒ NO ARE STORAGE BUILDINGS/TANKS/AREAS PLACARDED ACCORDING TO NFPA 704?
20. ☐ YES ☒ NO ARE OTHER TYPES OF PLACARDS USED?

SECTION C PERSON COMPLETING FORM

This person will be contacted to answer any questions needing clarification.

1. PRINT NAME: Timothy Todd

2. SIGNATURE (REQUIRED): Timothy R. Todd

3. DATE SURVEY COMPLETED: 11/24/98

SCHNITZER STEEL IND INC

PO BOX 10047  
PORTLAND

OR 97210-1524

RETAIN A COPY OF THIS SURVEY FOR 3 YEARS

SCHN00274461



## **ATTACHMENT 4**

szrpt105.doc

SCHN00274462



**MEMORANDUM**

---

**To:** File  
**From:** Tim Todd  
**Date:** July 21, 1997  
**Subject:** July 9, 1997, Car Fire - International Terminals

---

On 9, 1997, at approximately 3:00 a.m., a stack of crushed car bodies near the railroad tracks just west of the plate shop building caught fire. IT personnel reported the fire to the Portland Fire Bureau immediately after it was discovered. As PFB responded, the fire spread to adjacent stacks of car bodies. The fire was eventually extinguished with water pumped from the river by the PFB fireboat.

IT personnel covered all storm water catchbasins in the vicinity of the fire to prevent suppression water, which accumulated in the drainage basin to the north of the shredder, from entering the river. Accumulated fire suppression water was pumped by IT crews into the process water tanks for use within the shredder system. IT crews placed straw bales around all catchbasins as an added precaution to prevent burn products from entering the river. Oil sorbent pads and booms were also deployed to reduce the potential for oil to enter the storm drainage system. At the request of the U.S. Coast Guard, 2 sections of oil containment boom were deployed on the river near storm water outfalls that may have been affected.

Because USCG staff noted a slight oil sheen on the river near the facility, SSI notified the NRC (report #394369) and OERS (incident #97-1781) of the fire at approximately 10:00 a.m. on July 9, 1997. Ed Wilson of DEQ called to inquire regarding the status of the fire, I briefed him. He expressed concern that burn products could enter the water with suppression water. I described our precautions, he seemed satisfied with our efforts, but suggested that I contact Ranei Nomura of DEQ to inquire about possible violations of our storm water discharge permit if suppression water were to leave the site. I called Ms. Nomura, she said that no violation would occur if a discharge of suppression water had occurred, since fire suppression water is excluded from discharge regulations (see attached email).

On July 10, 1997, Spencer Environmental vacuumed all debris out of storm water catchbasins that may have been impacted by suppression water. All solid debris was swept up from areas where fire suppression water had ponded.

SCHN00274463



July 9, 1997 Fire at IT  
July 21, 1997  
Page 2 of 2

On July 11, 1997, Paul Keiran of DEQ's Water Quality Division visited IT to review procedures used to mitigate potential impacts to surface water. Mr. Keiran indicated that he was satisfied with SSP's efforts.



## **ATTACHMENT 5**

**SCHN00274465**





November 5, 1996

Service Request No: K9606885

Tim Todd  
Schnitzer Steel Products Company  
P.O. Box 10047  
Portland, OR 97210

Re: SSP Project

Dear Tim:

Enclosed are the results of the sample(s) submitted to our laboratory on October 28, 1996. For your reference, these analyses have been assigned our service request number K9606885.

All analyses were performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions. My extension is 239.

Respectfully submitted,

Columbia Analytical Services, Inc.

A handwritten signature in black ink, appearing to read 'Howard Boorse', written over a horizontal line.

Howard Boorse  
Project Chemist

HB/amy

Page 1 of

13



**COLUMBIA ANALYTICAL SERVICES, Inc.****Acronyms**

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
J	Estimated concentration. The value is less than the method reporting limit, but greater than the method detection limit.
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected at or above the MRL
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

00002

SCHN00274578



**COLUMBIA ANALYTICAL SERVICES, INC.**

**Client:** Schnitzer Steel Products Co.  
**Project:** SSP  
**Sample Matrix:** Soil

**Service Request No.:** K9606885  
**Date Received:** 10/28/96

**CASE NARRATIVE**

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for sample(s) designated for Tier I data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses.

All EPA recommended holding times have been met for analyses in this sample delivery group.

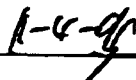
The following difficulties were experienced during analysis of this batch:

The surrogate recovery for EPA Method 8015M in samples SS2, SS3, SS4 and SS5 were not calculated. The analysis of these samples required a dilution which resulted in a surrogate concentration below the Method Reporting Limit (MRL). No further corrective action was taken.

Approved by



Date



00002

SCHN00274579



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Schnitzer Steel Products Co.  
Project: SSP  
Sample Matrix: Soil

Service Request: K9606885  
Date Collected: 10/25/96  
Date Received: 10/28/96

## Total Solids

Prep Method: NONE  
Analysis Method: 160.3M  
Test Notes:

Units: PERCENT  
Basis: NA

Sample Name	Lab Code	Date Analyzed	Result	Result Notes
SED1-675	K9606885-001	10/29/96	39.9	
SED2-500	K9606885-002	10/29/96	37.6	
SED3-100	K9606885-003	10/29/96	64.6	
SS1	K9606885-004	10/29/96	48.0	
SS2	K9606885-005	10/29/96	63.4	
SS3	K9606885-006	10/29/96	67.9	
SS4	K9606885-007	10/29/96	62.6	
SS5	K9606885-008	10/29/96	52.5	

Approved By: \_\_\_\_\_

Date: 11/2/96

Total Solids: 160.3M

Q9606885-001 - Sample 10/28/96

004

SCHN00274580



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Schnitzer Steel Products Co.  
Project: SSP  
Sample Matrix: Soil

Service Request: K9606885  
Date Collected: 10/25/96  
Date Received: 10/28/96  
Date TCLP Performed: 11/1/96  
Date Extracted: 11/4/96

## Toxicity Characteristic Leaching Procedure (TCLP)

EPA Method 1311

Metals

Units: mg/L (ppm) in TCLP Extract

Analyte	EPA Method	MRL	Regulatory Limit*	Sample Name:	SED1-675	SED2-500	SED3-100
				Lab Code:	K9606885-001	K9606885-002	K9606885-003
				Date Analyzed:	11/4/96	11/4/96	11/4/96
Arsenic	3010A/6010A	0.1	5		ND	ND	ND
Barium	3010A/6010A	0.5	100		ND	ND	ND
Cadmium	3010A/6010A	0.01	1		ND	ND	ND
Chromium	3010A/6010A	0.01	5		ND	ND	ND
Lead	3010A/6010A	0.05	5		ND	ND	ND
Mercury	7470	0.001	0.2		ND	ND	ND
Selenium	3010A/6010A	0.1	1		ND	ND	ND
Silver	3010A/6010A	0.01	5		ND	ND	ND

*Sediment Samples*

\* From 40 CFR Part 261, et al., and Federal Register, March 29, 1990 and June 29, 1990.

Approved By: SimADate: 11/4/96

TCLP/10/19/96

Schnitzer Steel - Sample 11/4/96

0005

SCHN00274581



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Schnitzer Steel Products Co.  
Project: SSP  
Sample Matrix: Soil

Service Request: K9606885  
Date Collected: 10/25/96  
Date Received: 10/28/96  
Date TCLP Performed: 11/1/96  
Date Extracted: 11/4/96

## Toxicity Characteristic Leaching Procedure (TCLP)

EPA Method 1311

Metals

Units: mg/L (ppm) in TCLP Extract

Analyte	EPA Method	MRL	Regulatory Limit*	Sample Name:		
				SS1	SS2	SS3
				Lab Code:	Lab Code:	Lab Code:
				Date Analyzed:	Date Analyzed:	Date Analyzed:
				K9606885-004	K9606885-005	K9606885-006
				11/4/96	11/4/96	11/4/96
Arsenic	3010A/6010A	0.1	5	ND	ND	0.06
Barium	3010A/6010A	0.5	100	0.8	1.1	0.9
Cadmium	3010A/6010A	0.01	1	ND	ND	ND
Chromium	3010A/6010A	0.01	5	ND	ND	0.01
Lead	3010A/6010A	0.05	5	ND	ND	ND
Mercury	7470	0.001	0.2	ND	ND	ND
Selenium	3010A/6010A	0.1	1	ND	ND	ND
Silver	3010A/6010A	0.01	5	ND	ND	ND

Unknown Samples.  
Not Sediment Samples.

From 40 CFR Part 261, et al., and Federal Register, March 29, 1990 and June 29, 1990.

Approved By: EmmaDate: 11/4/96

TCLP/102194

0085(CP,BA) - Sample (2) 11/4/96

00006

SCHN00274582



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Schnitzer Steel Products Co.  
 Project: SSP  
 Sample Matrix: Soil

Service Request: K9606885  
 Date Collected: 10/25/96  
 Date Received: 10/28/96  
 Date TCLP Performed: 11/1/96  
 Date Extracted: 11/4/96

## Toxicity Characteristic Leaching Procedure (TCLP)

EPA Method 1311

Metals

Units: mg/L (ppm) in TCLP Extract

Analyte	EPA Method	MRL	Regulatory Limit*	Sample Name: SS4 SS5 Method Blank		
				Lab Code: K9606885-007 K9606885-008 K9606885-MB	Date Analyzed: 11/4/96 11/4/96 11/4/96	
Arsenic	3010A/6010A	0.1	5	ND	ND	ND
Barium	3010A/6010A	0.5	100	1.1	1.0	ND
Cadmium	3010A/6010A	0.01	1	0.02	ND	ND
Chromium	3010A/6010A	0.01	5	ND	ND	ND
Lead	3010A/6010A	0.05	5	ND	ND	ND
Mercury	7470	0.001	0.2	ND	ND	ND
Selenium	3010A/6010A	0.1	1	ND	ND	ND
Silver	3010A/6010A	0.01	5	ND	ND	ND

Sample location or  
 purpose unknown.  
 Not sediment samples

From 40 CFR Part 261, et al., and Federal Register, March 29, 1990 and June 29, 1990.

Approved By: EMADate: 11/4/96

TCLP/102194

007(CF,RA) - Sample (3) 11/4/96

000007

SCHN00274583



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Schmitzer Steel Products Co.  
Project: SSP  
Sample Matrix: Soil

Service Request: K9606885  
Date Collected: 10/25/96  
Date Received: 10/28/96  
Date Extracted: 11/1/96

Hydrocarbon Scan  
EPA Methods 3550A/8015 Modified  
Units: mg/Kg (ppm)  
Dry Weight Basis

Sample Name:	SED1-675	SED2-500	SED3-100
Lab Code:	K9606885-001	K9606885-002	K9606885-003
Date Analyzed:	11/1/96	11/1/96	11/1/96

Analyte	MRL			
Gasoline	10	ND	ND	ND
Mineral Spirits	10	ND	ND	ND
Jet Fuel	10	ND	ND	ND
Kerosene	10	ND	ND	ND
Diesel	10	ND	2340	ND
Other*	20	1010	1040	99

*Sediment samples*

\* Quantified using 30-weight motor oil as a standard.

Approved By: *Anda Neuneker*

Date: *11-4-96*

3572/10/2094  
COLUMBIA ANALYTICAL SERVICES, INC. - 00136 11/96

00008

SCHN00274584



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Schnitzer Steel Products Co.  
Project: SSP  
Sample Matrix: Soil

Service Request: K9606885  
Date Collected: 10/25/96  
Date Received: 10/28/96  
Date Extracted: 11/1/96

Hydrocarbon Scan  
EPA Methods 3550A/8015 Modified  
Units: mg/Kg (ppm)  
Dry Weight Basis

Sample Name:	SS1	SS2	SS3
Lab Code:	K9606885-004	K9606885-005	K9606885-006
Date Analyzed:	11/1/96	11/2/96	11/2/96

Analyte	MRL			
Gasoline	10	ND	ND	ND
Mineral Spirits	10	ND	ND	ND
Jet Fuel	10	ND	ND	ND
Kerosene	10	ND	ND	ND
Diesel	10	ND	ND	ND
Other*	20	7870	14000	2000

Sample location or  
purpose unknown.  
Not sediment samples

\* Quantified using 30-weight motor oil as a standard.

Approved By: Linda Neuseker

Date: 11-4-96

1523/102094  
000009C.SS1 - 00150 (7) 11/4/96

Page No.:

00009

SCHN00274585



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Schnitzer Steel Products Co.  
Project: SSP  
Sample Matrix: Soil

Service Request: K9606885  
Date Collected: 10/25/96  
Date Received: 10/28/96  
Date Extracted: 11/1/96

Hydrocarbon Scan  
EPA Methods 3550A/8015 Modified  
Units: mg/Kg (ppm)  
Dry Weight Basis

Sample Name:	SS4	SS5	Method Blank
Lab Code:	K9606885-007	K9606885-008	K961101-MB
Date Analyzed:	11/2/96	11/2/96	11/1/96

Analyte	MRL			
Gasoline	10	ND	ND	ND
Mineral Spirits	10	ND	ND	ND
Jet Fuel	10	ND	ND	ND
Kerosene	10	ND	ND	ND
Diesel	10	ND	ND	ND
Other*	20	32000	11000	ND

Sample location and  
purpose unknown.  
Not sediment samples.

\* Quantified using 30-weight motor oil as a standard.

Approved By: John Neuner

Date: 11-4-96

3522/102004  
0005PHC.SS1 - 0015a (1) 11/4/96

Page No.:  
00010

SCHN00274586



## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

Client: Schnitzer Steel Products Co.  
Project: SSP  
Sample Matrix: Soil

Service Request: K9606885  
Date Collected: 10/25/96  
Date Received: 10/28/96  
Date TCLP Performed: 11/1/96  
Date Extracted: 11/4/96  
Date Analyzed: 11/4/96

Matrix Spike Summary  
Toxicity Characteristic Leaching Procedure (TCLP)  
EPA Method 1311

## Metals

Units: mg/L (ppm) in TCLP Extract

Sample Name: SED1-675  
Lab Code: K9606885-001

Analyte	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery
Arsenic	5	ND	5.1	102
Barium	5	ND	5.4	108
Cadmium	1	ND	0.93	93
Chromium	5	ND	4.81	96
Lead	5	ND	4.70	94
Mercury	0.01	ND	0.009	90
Selenium	1	ND	1.0	100
Silver	1	ND	0.92	92

Percent recovery information is provided in order to assess the performance of the method on this matrix.

Approved By: EMADate: 11/4/96

TCLP Method 1311 - Spikes 11/4/96

Page No: 1

SCHN00274587



## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

Client: Schnitzer Steel Products Co.  
Project: SSP  
Sample Matrix: Soil

Service Request: K9606885  
Date Collected: 10/25/96  
Date Received: 10/28/96  
Date Extracted: 11/1/96  
Date Analyzed: 11/1,2/96

Surrogate Recovery Summary  
Hydrocarbon Scan  
EPA Methods 3550A/8015 Modified

Sample Name	Lab Code	Percent Recovery o-Terphenyl
SED1-675	K9606885-001	82
SED2-500	K9606885-002	65
SED3-100	K9606885-003	72
SS1	K9606885-004	74
SS2	K9606885-005	NA
SS3	K9606885-006	NA
SS4	K9606885-007	NA
SS5	K9606885-008	NA
Method Blank	K961101-MB	70

CAS Acceptance Limits: 56-116

NA Not Applicable; see case narrative.

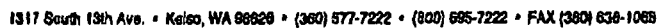
Approved By: Linda NeumeckerDate: 11-4-96

SUR/11/1594  
COLUMBIA ANALYTICAL SERVICES, INC.

Page No:  
00012

SCHN00274588





DATE 10/25/96 PAGE 1 OF 1

08/15/97 08:48 FAX 1 360 636 1068

**CAS KELSEY**


013

SCHN00274589



MEMORANDUM

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To: File  
From: Tim Todd   
Date: February 1, 1996  
Subject: International Terminals Slip Repair

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During initial "toe-trench" dredging for erosion protection on the north side of the IT slip, strong petroleum odors were noted in dredged material, and an oily sheen was observed on the water surface where dredging was conducted (see attached figure). The dredged material consisted of brown to gray medium- to fine-grain sand with some silt.

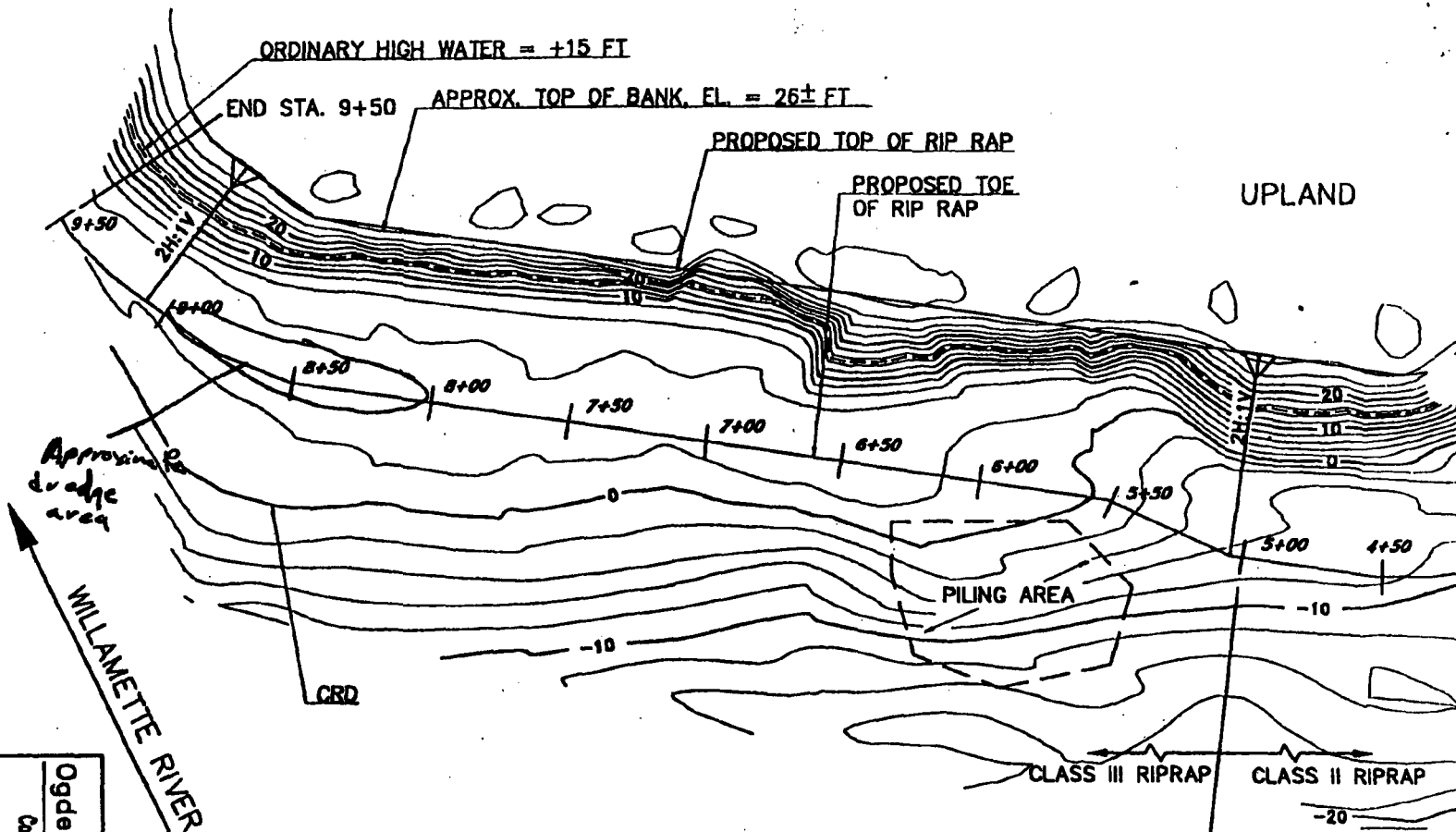
Petroleum sheen and odors were first noticed in material dredged between survey stations 9+00 and 8+00, approximately 40 feet south of the top of the slip bank. In an attempt to define the extent of material impacted by petroleum, the dredge was moved eastward, and material dredged from 3 additional locations, between survey stations 8+00 and 6+50, was evaluated for petroleum. Two of the additional locations did not appear to be impacted by petroleum, while material dredged from the third location, near station 6+50, exhibited strong petroleum odors and sheen.

Two samples of material dredged near survey stations 9+00 and 8+00 were submitted for laboratory analyses for hydrocarbon identification and quantification, and TCLP metals (see attached laboratory report). TCLP metals were not detected at or above method reporting limits in either sample. Petroleum in the ranges of gasoline and diesel was detected in one of the samples at concentrations of 43 and 70 parts per million (ppm), respectively. This sample was also analyzed for BTEX (benzene, toluene, ethylbenzene, and total xylenes). The total concentration of BTEX detected in the sample was approximately 620 parts per billion (ppb), including 53 ppb of benzene.

The incident was reported to the U.S. Coast Guard, the National Response Center, and the Oregon Emergency Response System (OERS, consistent with applicable regulations. The Oregon Department of Environment Quality (DEQ) was notified by OERS. Elliot Zais of DEQ has requested copies of laboratory analyses, but has not indicated that additional action will be necessary.

SCHN00274600





# INTERNATIONAL TERMINALS

NOTE 1. DEPTH/ELEVATION CONTOURS ARE IN FEET, CRD, AND ARE COMPUTER PLOTTED  
 BASED ON AUGUST 1995 SURVEY BY CHASE-JONES & ASSOCIATES

PURPOSE: RIVER BANK STABILIZATION  
 DATUM: COLUMBIA RIVER DATUM (CRD):  
 CRD IS 1.6' ABOVE NGVD AT  
 WILLAMETTE RIVER MILE 3.7  
 ADJACENT PROPERTY OWNERS:  
 1. NORTHWEST TERMINAL COMPANY  
 2. PORT OF PORTLAND

SCALE: 1" = 60'  
 95-1150 WILLAMETTE RIVER  
 EROSION CONTROL

PROPOSED EMERGENCY  
 BANK PROTECTION  
 IN: WILLAMETTE RIVER  
 AT: RIVER MILE 3.7  
 COUNTY OF: MULTNOMAH  
 APPLICATION BY: SCHNITZER GROUP  
 SHEET 2 OF 4 DATE: 12/20/95

Ogden Beeman & Associates, Inc.  
 Consulting in the development of ports, waterways,  
 and marine facilities

SCHN00274601



January 31, 1996

Schnitzer Steel Industries, Inc.  
P.O. Box 10047  
Portland, OR 97210

Attention: Tim Todd

RE: JOB #  
P.O.#  
PROJECT - DREDGE SAND

Enclosed are test results for your samples received in this lab on Jan. 26, 1996. For your reference, these analyses have been assigned our NCA # P601335.

Solid samples are reported on a dry weight basis except for Oregon DEQ Fuels Methods and where otherwise noted.

This report will be accompanied by a separate Quality Control Data Report, unless omitted by client request.

Please call if you have any questions.

Respectfully,

  
Philip Nerenberg  
Laboratory Manager

SCHN00274602



**TCLP per EPA 1311, 6010, 7470**  
**Results In mg/L (ppm)**

**Client:** Schnitzer Steel Industries, Inc.  
**Project:** DREDGE SAND

**NCA Project #:** P601335  
**Matrix:** soil  
**Sampled:** 01/26/96  
**Received:** 01/26/96

Client ID	Lab ID	Analyte	Result	MRL	Date Extracted	Date Prepared	Date Analyzed
1	P601335-1	Arsenic	ND	0.50	01/26/96	01/29/96	01/30/96
		Barium	ND	0.50			
		Cadmium	ND	0.010			
		Chromium	ND	0.010			
		Lead	ND	0.20			
		Mercury	ND	0.00020			
		Selenium	ND	0.25			
		Silver	ND	0.010			
2	P601335-2	Arsenic	ND	0.50	01/26/96	01/29/96	01/30/96
		Barium	ND	0.50			
		Cadmium	ND	0.010			
		Chromium	ND	0.010			
		Lead	ND	0.20			
		Mercury	ND	0.00020			
		Selenium	ND	0.25			
		Silver	ND	0.010			

**MRL**  
**ND**  
 \*

**Method Reporting Level**  
 None Detected at or above the method reporting level  
 See Comment Section at end of report



**TPH-HCID per Oregon DEQ**  
**Results in mg/kg (ppm)**
**Client:** Schnitzer Steel Industries, Inc.  
**Project:** DREDGE SAND

**NCA Project #:** P601335  
**Matrix:** soil  
**Sampled:** 01/26/96  
**Received:** 01/26/96

Client ID	Lab ID	Analyte	Results	MRL	Date Prepared	Date Analyzed
1	P601335-1	Gasoline Diesel Heavy/Oil	DET DET ND	20 50 100	01/26/96	01/26/96
2	P601335-2	Gasoline Diesel Heavy/Oil	ND ND ND	20 50 100	01/26/96	01/26/96

MRL  
ND  
\*

Method Reporting Level  
None Detected at or above the method reporting level  
See Comment Section at end of report



**TPH-G per Oregon DEQ (C6-C10)**  
Results in mg/kg (ppm)**Client:** Schnitzer Steel Industries, Inc.  
**Project:** DREDGE SAND**NCA Project #:** P601335  
**Matrix:** soil  
**Sampled:** 01/26/96  
**Received:** 01/26/96

<u>Client ID</u>	<u>Lab ID</u>	<u>Analyte</u>	<u>Results</u>	<u>MRL</u>	<u>Date Prepared</u>	<u>Date Analyzed</u>
1	P601335-1	Gasoline/Related	43	4.0	01/29/96	01/30/96

MRL  
ND  
\*Method Reporting Level  
None Detected at or above the method reporting level  
See Comment Section at end of report



**TPH-418.1M per Oregon DEQ**  
Results in mg/kg (ppm)**Client:** Schnitzer Steel Industries, Inc.  
**Project:** DREDGE SAND**NCA Project #:** P601335  
**Matrix:** soil  
**Sampled:** 01/26/96  
**Received:** 01/26/96

<u>Client ID</u>	<u>Lab ID</u>	<u>Analyte</u>	<u>Results</u>	<u>MRL</u>	<u>Date Prepared</u>	<u>Date Analyzed</u>
1	P601335-1	TPH	70	40	01/26/96	01/26/96

**MRL**  
**ND**  
\***Method Reporting Level**  
None Detected at or above the method reporting level  
See Comment Section at end of report



**BTEX per EPA 8020**  
**Results in ug/kg (ppb)****Client:** Schnitzer Steel Industries, Inc.  
**Project:** DREDGE SAND**NCA Project #:** P601335  
**Matrix:** soil  
**Sampled:** 01/26/96  
**Received:** 01/26/96

Client ID	Lab ID	Analyte	Results	MRL	Date Prepared	Date Analyzed
1	P601335-1	Benzene	53	25	01/29/96	01/30/96
		Toluene	79	25		
		Ethylbenzene	170	25		
		Xylenes (total)	320	25		

**MRL**  
**ND**  
•**Method Reporting Level**  
None Detected at or above the method reporting level  
See Comment Section at end of report



**SURROGATE RECOVERIES (%)****Client:** Schnitzer Steel Industries, Inc.  
**Project:** DREDGE SAND**NCA Number:** P601335  
**Received:** 01/26/1996

Sample Name	Analyte	Result	Control Limits
<b>TPH-HCID per Oregon DEQ</b>			
1	1-Chlorooctadecane	116	50-150
2	1-Chlorooctadecane	98	50-150
<b>TPH-G per Oregon DEQ (C6-C10)</b>			
1	4-Bromofluorobenzene	102	63-126
	Trifluorotoluene	66	50-150
<b>BTEX per EPA 8020</b>			
1	4-Bromofluorobenzene	89	63-126

MRL  
ND  
\*Method Reporting Level  
None Detected at or above the method reporting level  
See Comment Section at end of report



January 31, 1996

Schnitzer Steel Industries, Inc.  
P.O. Box 10047  
Portland, OR 97210

Attention: Tim Todd

Re: Quality Control Data  
JOB #  
P.O.#  
PROJECT - DREDGE SAND

NCA project number P601335.

Note: Surrogate Recoveries are included in the final report.

#### QUALITY CONTROL DEFINITIONS

##### METHOD BLANK RESULTS

The method blank is an analyte-free matrix which is carried through the same analytical process as the samples. It is used to document contamination that may result from the analytical process.

##### SURROGATE STANDARD

A surrogate standard (i.e., a chemical compound not expected to occur in an environmental sample) is added to each sample, blank, and matrix spike sample just prior to extraction or processing. The recovery of the surrogate standard is used to monitor for unusual matrix effects, gross sample processing errors, etc. Surrogate recovery is evaluated for acceptance by determining whether the measured concentration falls within accepted limits.

SCHN00274609



Accuracy is measured by percent recovery as in:

$$\% \text{ Recovery} = \frac{(\text{Measured Concentration})}{(\text{Actual Concentration})} \times 100$$

Precision is measured using duplicate tests by relative percent difference.

$$\text{RPD} = \frac{(\text{Result of Test 1} - \text{Result of Test 2})}{(\text{Result of Test 1} + \text{Result of Test 2})/2} \times 100$$

If you should have any questions concerning this report, please contact me.

Sincerely,

  
Philip Nerenberg  
Laboratory Manager



**BATCH QUALITY CONTROL RESULTS**  
**TCLP per EPA 1311, 6010, 7470**
**Client:** Schnitzer Steel Industries, Inc.  
**Project:** DREDGE SAND

**NCA Project #:** P601335  
**Received:** 01/26/96

**METHOD BLANK**  
**Batch # KR96010a**  
**Results In mg/L (ppm)**

Compound	Result	MRL
Arsenic	ND	0.50
Barium	ND	0.50
Cadmium	ND	0.010
Chromium	ND	0.010
Lead	ND	0.20
Selenium	ND	0.25
Silver	ND	0.010
Date Extracted	01/26/96	
Date Prepared	01/29/96	
Date Analyzed	01/29/96	

**MATRIX SPIKE**  
**Batch # KR96010a**  
**Results In mg/L (ppm)**
**Spike ID P601335-1**

Compound	Spike Added	Sample Conc	MS Conc	MS % Rec	QC Limit % Rec
Arsenic	5.0	ND	4.70	94	50-150
Barium	10	ND	9.87	99	50-150
Cadmium	1.0	ND	0.921	92	50-150
Chromium	5.0	ND	4.84	97	50-150
Lead	5.0	ND	4.76	95	50-150
Selenium	1.0	ND	0.909	91	50-150
Silver	2.0	ND	1.88	94	50-150



**BATCH QUALITY CONTROL RESULTS**  
**TCLP per EPA 1311, 6010, 7470**
**Client:** Schnitzer Steel Industries, Inc.  
**Project:** DREDGE SAND

**NCA Project #:** P601335  
**Received:** 01/26/96

**LABORATORY CONTROL SAMPLE**  
**Batch # KR96010a**  
**Results in mg/L (ppm)**

Compound	True	Found	% Rec	QC Limit % Rec
Arsenic	5.0	4.81	96	95-120
Barium	10	9.56	96	78-116
Cadmium	1.0	0.929	93	84-120
Chromium	5.0	4.77	95	83-116
Lead	5.0	4.76	95	89-117
Selenium	1.0	1.10	110	87-123
Silver	2.0	1.96	98	76-112



**BATCH QUALITY CONTROL RESULTS**  
**TCLP per EPA 1311, 6010, 7470**
**Client:** Schnitzer Steel Industries, Inc.  
**Project:** DREDGE SAND

**NCA Project #:** P601335  
**Received:** 01/26/96

**METHOD BLANK**  
**Batch # ZT96016a**  
**Results In mg/L (ppm)**

Compound	Result	MRL
Mercury	ND	0.00020
Date Extracted	01/26/96	
Date Prepared	01/29/96	
Date Analyzed	01/30/96	

**MATRIX SPIKE**  
**Batch # ZT96016a**  
**Results In mg/L (ppm)**
**Spike ID P601335A-1**

Compound	Spike Added	Sample Conc	MS Conc	MS % Rec	QC Limit % Rec
Mercury	0.0050	ND	0.0045	90	50-150

**LABORATORY CONTROL SAMPLE**  
**Batch # ZT96016a**  
**Results In mg/L (ppm)**

Compound	True	Found	% Rec	QC Limit % Rec
Mercury	0.0050	0.0049	98	81-107



**BATCH QUALITY CONTROL RESULTS**  
**TPH-HCID per Oregon DEQ****Client:** Schnitzer Steel Industries, Inc.  
**Project:** DREDGE SAND**NCA Project #:** P601335  
**Received:** 01/26/96**METHOD BLANK**  
**Batch # FA96008c**  
**Results in mg/kg (ppm)**

Compound	Result	MRL
Gasoline	ND	20
Diesel	ND	50
Heavy/Oil	ND	100
Date Prepared	01/26/96	
Date Analyzed	01/26/96	

Surrogate Recovery (%)	Result	Control Limit
1-Chlorooctadecane	115	50-150



**BATCH QUALITY CONTROL RESULTS**  
**TPH-G per Oregon DEQ (C6-C10)**
**Client:** Schnitzer Steel Industries, Inc.  
**Project:** DREDGE SAND

**NCA Project #:** P601335  
**Received:** 01/26/96

**METHOD BLANK**  
**Batch # BT96004c**  
**Results In mg/kg (ppm)**

Compound	Result	MRL
Gasoline/Related	ND	2.0
Date Prepared	01/29/96	
Date Analyzed	01/29/96	

Surrogate Recovery (%)	Result	Control Limit
4-Bromofluorobenzene	102	63-126
Trifluorotoluene	98	50-150

**DUPLICATE**  
**Batch # BT96004a**  
**Results In mg/kg (ppm)**
**Duplicate ID P601270-1**

Compound	Sample Conc	Dup Conc	RPD	QC Limit RPD
Gasoline	390	360	8.0	50

**LABORATORY CONTROL SAMPLE**  
**Batch # BT96004a**  
**Results In mg/kg (ppm)**

Compound	True	Found	% Rec	QC Limit % Rec
Gasoline	62	66.4	107	50-150



**BATCH QUALITY CONTROL RESULTS**  
**TPH-418.1M per Oregon DEQ**

Client: Schnitzer Steel Industries, Inc.  
Project: DREDGE SAND

NCA Project #: P601335  
Received: 01/26/96

**METHOD BLANK**  
Batch # FB96005a  
Results in mg/kg (ppm)

Compound	Result	MRL
TPH	ND	20
Date Prepared	01/26/96	
Date Analyzed	01/26/96	

**DUPLICATE**  
Batch # FB96005a  
Results in mg/kg (ppm)

Duplicate ID P601282-1

Compound	Sample Conc	Dup Conc	RPD	QC Limit RPD
TPH	562	560	0.36	50

**LABORATORY CONTROL SAMPLE**  
Batch # FB96005a  
Results in mg/kg (ppm)

Compound	True	Found	% Rec	QC Limit % Rec
TPH	250	203	81	30-134



**BATCH QUALITY CONTROL RESULTS**  
**BTEX per EPA 8020**
**Client:** Schnitzer Steel Industries, Inc.  
**Project:** DREDGE SAND

**NCA Project #:** P601335  
**Received:** 01/26/96

**METHOD BLANK**  
**Batch # BS96003c**  
**Results In ug/kg (ppb)**

Compound	Result	MRL
Benzene	ND	13
Toluene	ND	13
Ethylbenzene	ND	13
Xylenes (total)	ND	13
Date Prepared	01/29/96	
Date Analyzed	01/29/96	

Surrogate Recovery (%)	Result	Control Limit
4-Bromofluorobenzene	105	63-126

**MATRIX SPIKE AND MATRIX SPIKE DUPLICATE**  
**Batch # BS96003a**  
**Results In ug/L (ppb)**
**Spike ID P601250A-4**

Compound	Spike Added	Sample Conc	MS Conc	MS %Rec
Benzene	20	ND	17.6	88
Chlorobenzene	20	ND	18.4	92
Ethylbenzene	20	ND	18.8	94
Toluene	20	ND	17.7	89
o-Xylene	20	ND	18.6	93

Compound	Spike Added	MSD Conc	MSD % Rec	RPD	QC Limit RPD	% Rec
Benzene	20	17.8	89	1.1	17	56-123
Chlorobenzene	20	18.5	93	1.1	16	53-124
Ethylbenzene	20	18.4	92	2.2	20	45-130
Toluene	20	18.1	91	2.2	24	54-123
o-Xylene	20	18.3	92	1.1	20	50-127



**BATCH QUALITY CONTROL RESULTS**  
**BTEX per EPA 8020****Client:** Schnitzer Steel Industries, Inc.  
**Project:** DREDGE SAND**NCA Project #:** P601335  
**Received:** 01/26/96**LABORATORY CONTROL SAMPLE**  
**Batch # BS96003c**  
**Results in ug/kg (ppb)**

Compound	True	Found	% Rec	QC Limit % Rec
Benzene	20	17.7	89	69-138
Chlorobenzene	20	18.2	91	72-137
Ethylbenzene	20	18.0	90	61-141
Toluene	20	17.6	88	53-151
o-Xylene	20	18.1	91	62-144





## CHAIN OF CUSTODY REPORT

Work Order #: P601335

15.3

18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-9308 (206) 481-9200 FAX 485-2992  
East 11115 Montgomery, Suite B, Spokane, WA 99206-4779 (509) 924-9200 FAX 924-9290  
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 643-9200 FAX 644-2202

CLIENT: <u>Schnitzer Steel Industries</u>			REPORT TO: <u>Tim Todd</u>			<b>TURNAROUND REQUEST in Business Days *</b> Organic & Inorganic Analyses 10 5 3 2 1 Fuels & Hydrocarbon Analyses 5 3 2 1 OTHER Specify: <u>ASAP</u> * Turnaround Requests less than standard may incur Rush Charges.					
ADDRESS: <u>P.O. Box 10247</u> <u>Portland OR 97210</u>			ATTENTION:								
PHONE: <u>286-6944</u> FAX: <u>286-6948</u>			BILLING TO:								
PROJECT NAME: <u>Dredge Sand</u>			P.O. NUMBER:								
PROJECT NUMBER:			NCA QUOTE #:								
SAMPLED BY: <u>Tim Todd / Ke Preston</u>			Analysis Request:								
NCA SAMPLE NUMBER	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE / TIME	<div style="transform: rotate(-45deg); display: inline-block;">EPA 8015H 1/26/96 12:00 TEL: 418.74 TPH 418.74 GAS/BTEX</div>				MATRIX (W, S, O)	# OF CONTAINERS	COMMENTS & PRESERVATIVES USED		
1	1	1/26/96 12:00					S	1			
2	2	1/26/96 12:00					S	1			
3.											
4.											
5.											
6.											
7.											
8.											
9.											
10.											
RELINQUISHED BY: <u>Timothy D. Todd</u>			DATE: <u>1/26/96</u>			RECEIVED BY: <u>Sara McClung</u>			DATE: <u>1-26-96</u>		
PRINT NAME: <u>Timothy D. Todd</u> FIRM: <u>SSI</u>			TIME: <u>1330</u>			PRINT NAME: <u>Sara McClung</u> FIRM: <u>NCA</u>			TIME: <u>1525</u>		
RELINQUISHED BY:			DATE:			RECEIVED BY:			DATE:		
PRINT NAME:			TIME:			PRINT NAME:			TIME:		
FIRM:						FIRM:					
ADDITIONAL REMARKS:									P. OF		

COC Rev 7, 8/96

SCHN00274619



**ATTACHMENT 6**

SCHN00274693





March 6, 1998

Service Request No: K9801312

Tim Todd  
Schnitzer Steel Products Company  
P.O. Box 10047  
Portland, OR 97210

**Re: Schnitzer Steel**

Dear Tim:

Enclosed are the results of the sample(s) submitted to our laboratory on March 3, 1998. For your reference, these analyses have been assigned our service request number K9801312.

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions. My extension is 239.

Respectfully submitted,

**Columbia Analytical Services, Inc.**

A handwritten signature in black ink, appearing to read 'Howard Boorse', is written over a horizontal line.

Howard Boorse  
Project Chemist

HB/lj

Page 1 of 5



# COLUMBIA ANALYTICAL SERVICES, Inc.

## Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
J	Estimated concentration. The value is less than the method reporting limit, but greater than the method detection limit.
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected at or above the MRL
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

00002



**COLUMBIA ANALYTICAL SERVICES, INC.**

**Client:** Schnitzer Steel Products Co.  
**Project:** Schnitzer Steel  
**Sample Matrix:** Water

**Service Request No.:** K9801312  
**Date Received:** 3/3/98

**CASE NARRATIVE**

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for sample(s) designated for Tier I data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses.

All EPA recommended holding times have been met for analyses in this sample delivery group.

The following difficulties were experienced during analysis of this batch:

One of the surrogate recoveries for the hydrocarbon scan in sample S-1 was outside normal CAS control limits because of matrix interference. No further corrective action was taken.

Approved by                     *JD*                     Date                     *3-6-98*                    

00003

SCHN00274696



## Analytical Report

**Service Request:** K9801312  
**Date Collected:** 2/27/98  
**Date Received:** 3/3/98  
**Date Extracted:** 3/4/98

Units:	ug/L (ppb)	Sample Name:	S-1	Method Blank
Basis:	NA	Lab Code:	K9801312-001	K980304-MB
Methods:	EPA 3510C/8015B	Date Analyzed:	3/5/98	3/5/98

Analyte	MRL		
Gasoline	100	1560 SQ	ND SQ
Naphtha Distillate	100	ND SQ	ND SQ
Jet Fuel as JP-4	100	ND SQ	ND SQ
Mineral Spirits	100	ND	ND
Jet Fuel as Jet A	100	ND	ND
Kerosene	100	ND	ND
Diesel	100	ND	ND
Heavy Fuel Oil	250	ND	ND
Lube Oil	250	460000	ND
PHC as Diesel Fuel	250	ND	ND
Non-PHC as Diesel	500	ND	ND
Non-PHC as Gasoline	500	ND SQ	ND SQ

SQ	Semi-quantitative. Results are expected to exhibit a low bias due to the extraction procedure.
PHC as Diesel Fuel:	Extractable Petroleum Hydrocarbon fingerprint not matching any of the target analytes.
Non-PHC as Diesel:	Non-Petroleum Hydrocarbon components eluting in the extractable range of n-C8 - n-C44.
Non-PHC as Gasoline:	Non-Petroleum Hydrocarbon components eluting in the extractable range of n-C7 - n-C12.

3/6/98

00004

Page No.:

SCHN00274697



# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client:** Schnitzer Steel Products Co.  
**Project:** Schnitzer Steel  
**Sample Matrix:** Water

**Service Request:** K9801312  
**Date Collected:** 2/27/98  
**Date Received:** 3/3/98  
**Date Extracted:** 3/4/98  
**Date Analyzed:** 3/5/98

### Surrogate Recovery Summary Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

**Prep Method:** EPA 3510C  
**Analysis Method:** 8015B

**Units:** PERCENT  
**Basis:** NA

Sample Name	Lab Code	Test Notes	P e r c e n t R e c o v e r y		
			4-Bromofluorobenzene	4-Bromofluorobenzene	n-Triacontane
S-1	K9801312-001		105	73	NA
Method Blank	K980304-MB		90	58	85

CAS Acceptance Limits: 59-110 D-150 50-150

NA Not Applicable; see case narrative.

D Detected

Approved By: \_\_\_\_\_

Date: \_\_\_\_\_

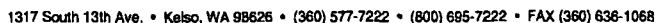
SUR3/020597p  
 01312PHC.LL1 - SUR 3/6/98

00004A

Page No.:

SCHN00274698





DATE 3/3/48 PAGE 1 OF 1

DISTRIBUTION: WHITE - return to originator. YELLOW - lab: PINK - retained by originator

SCHN00274699





January 11, 1999

Service Request No: K9808511

Jim Jakubiak  
Schnitzer Steel Products Company  
P.O. Box 10047  
Portland, OR 97296-0047

**Re: SSP-IT**

Dear Jim:

Enclosed are the results of the sample(s) submitted to our laboratory on December 14, 1998. For your reference, these analyses have been assigned our service request number K9808511.

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions. My extension is 239.

Respectfully submitted,

Columbia Analytical Services, Inc.

Howard Boorse  
Project Chemist

HB/sam

Page 1 of 6



## Acronyms

ASTM	American Society for Testing and Materials
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CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
J	Estimated concentration. The value is less than the method reporting limit, but greater than the method detection limit.
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
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NC	Not Calculated
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ND	Not Detected at or above the MRL
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

00002

SCHN00274701



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Schnitzer Steel Products Co.  
 Project: SSP-JT  
 Sample Matrix: Water

Service Request: K9808511  
 Date Collected: 12/10/98  
 Date Received: 12/14/98

Semivolatile Petroleum Products  
 Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name: OF-48  
 Lab Code: K9808511-001  
 Test Notes: X

Units: ug/L (ppb)  
 Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Gasoline	EPA 3510C	8015B	100	1	12/21/98	12/30/98	ND	*
Naphtha Distillate	EPA 3510C	8015B	100	1	12/21/98	12/30/98	ND	*
Jet Fuel as JP-4	EPA 3510C	8015B	100	1	12/21/98	12/30/98	ND	*
Mineral Spirits	EPA 3510C	8015B	100	1	12/21/98	12/30/98	ND	
Jet Fuel as Jet A	EPA 3510C	8015B	100	1	12/21/98	12/30/98	ND	
Kerosene	EPA 3510C	8015B	100	1	12/21/98	12/30/98	ND	
Diesel	EPA 3510C	8015B	100	1	12/21/98	12/30/98	ND	
Heavy Fuel Oil	EPA 3510C	8015B	250	1	12/21/98	12/30/98	ND	
Lube Oil	EPA 3510C	8015B	250	1	12/21/98	12/30/98	ND	
PHC as Diesel	EPA 3510C	8015B	250	1	12/21/98	12/30/98	ND	
Non-PHC as Diesel	EPA 3510C	8015B	500	1	12/21/98	12/30/98	ND	

X

The sample was extracted past the recommended hold time; see case narrative.

\*

Semi-quantitative. Results are expected to exhibit a low bias due to the extraction procedure.

PHC as Diesel Fuel:

Extractable Petroleum Hydrocarbon fingerprint not matching any of the target analytes.

Non-PHC as Diesel:

Non-Petroleum Hydrocarbon components eluting in the extractable range of n-C8 - n-C44.

Approved By: \_\_\_\_\_

Date: \_\_\_\_\_

1S22/020597p

08511PHC.LL1 - 1 1/9/99

Page No. 0003

SCHN00274702



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Schnitzer Steel Products Co.  
Project: SSP-IT  
Sample Matrix: Water

Service Request: K9808511  
Date Collected: NA  
Date Received: NA

Semivolatile Petroleum Products  
Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name: Method Blank  
Lab Code: K981221-WB  
Test Notes:

Units: ug/L (ppb)  
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Gasoline	EPA 3510C	8015B	100	1	12/21/98	12/30/98	ND	*
Naphtha Distillate	EPA 3510C	8015B	100	1	12/21/98	12/30/98	ND	*
Jet Fuel as JP-4	EPA 3510C	8015B	100	1	12/21/98	12/30/98	ND	*
Mineral Spirits	EPA 3510C	8015B	100	1	12/21/98	12/30/98	ND	
Jet Fuel as Jet A	EPA 3510C	8015B	100	1	12/21/98	12/30/98	ND	
Kerosene	EPA 3510C	8015B	100	1	12/21/98	12/30/98	ND	
Diesel	EPA 3510C	8015B	100	1	12/21/98	12/30/98	ND	
Heavy Fuel Oil	EPA 3510C	8015B	250	1	12/21/98	12/30/98	ND	
Lube Oil	EPA 3510C	8015B	250	1	12/21/98	12/30/98	ND	
PHC as Diesel	EPA 3510C	8015B	250	1	12/21/98	12/30/98	ND	
Non-PHC as Diesel	EPA 3510C	8015B	500	1	12/21/98	12/30/98	ND	

\* Semi-quantitative. Results are expected to exhibit a low bias due to the extraction procedure.  
PHC as Diesel Fuel: Extractable Petroleum Hydrocarbon fingerprint not matching any of the target analytes.  
Non-PHC as Diesel: Non-Petroleum Hydrocarbon components eluting in the extractable range of n-C8 - n-C44.

Approved By: TV Date: 1/9/99

1S22/020597p

08511PHC.LL1 - MB 1/9/99

Page No.:

00004

SCHN00274703



## QA/QC Report

**Service Request:** K9808511  
**Date Collected:** 12/10/98  
**Date Received:** 12/14/98  
**Date Extracted:** 12/21/98  
**Date Analyzed:** 12/30/98

Units: PERCENT  
Basis: NA

**CAS Acceptance Limits:**      59-110                      D-150                      50-150

Date:

Page No.: 00115

SCHN00274704





# CHAIN OF CUSTODY

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 • FAX (360) 636-1068

PAGE 1 OF 1 COC #

SR#: K982511

PROJECT NAME SSP-IT				
PROJECT NUMBER				
PROJECT MANAGER Jim Jakubik				
COMPANY/ADDRESS P.O. Box 10047 Portland OR 97296				
PHONE # (503) 286-6976		FAX # (503) 286-6948		
SAMPLER'S SIGNATURE J. Jakubik				
SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX
OF-48	12-10-98	10:00	W	825
NUMBER OF CONTAINERS				
Semi-volatile Organics by GC/MS				
625 <input type="checkbox"/> 8270 <input type="checkbox"/>				
Volatile Organics				
624 <input type="checkbox"/> 8280 <input type="checkbox"/>				
Pesticide / Herbicides				
608 <input type="checkbox"/> 8021 <input type="checkbox"/> BTEX <input type="checkbox"/>				
Total Toxic Organics (TTO)				
808 <input type="checkbox"/> 8141 <input type="checkbox"/> 8151 <input type="checkbox"/>				
PCB AROCLORS				
8082 <input type="checkbox"/>				
NWTPH - HClD <input type="checkbox"/> NWTPH-G <input type="checkbox"/>				
NWTPH-D <input type="checkbox"/> NWTPH-S <input type="checkbox"/>				
Hydrocarbon Solvents				
Chlorophenolics - 8151M <input type="checkbox"/> O & G <input type="checkbox"/>				
Tri <input type="checkbox"/> Tetra <input type="checkbox"/> Penta <input type="checkbox"/>				
PAHs 8310 <input type="checkbox"/> SIM <input type="checkbox"/>				
GC/MS-SIM				
PHT <input type="checkbox"/> Phenol <input type="checkbox"/> Phthalates <input type="checkbox"/>				
Metals Total or Dissolved				
(See list below)				
Cyanide <input type="checkbox"/> Hex-Chrom <input type="checkbox"/>				
pH, Cond., Cl, SO <sub>4</sub> , PO <sub>4</sub> , F, NO <sub>3</sub> , NO <sub>2</sub> , BOD, TSS, TDS (circle 2)				
15-N, COD, Total P, TAN, TOC, DOC (circle)				
TOC 8020 <input type="checkbox"/> AOX 1850 <input type="checkbox"/> 506 <input type="checkbox"/>				
REMARKS				

<b>REPORT REQUIREMENTS</b>		<b>INVOICE INFORMATION</b>		<b>Circle which metals are to be analyzed:</b>	
<input checked="" type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required		P.O. #		Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg	
<input type="checkbox"/> II. Report Dup., MS, MSD as required		Bill To: Jim Jakubik		Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg	
<input type="checkbox"/> III. Data Validation Report (Includes all raw data)		P.O. Box 10047		SPECIAL INSTRUCTIONS/COMMENTS:	
<input type="checkbox"/> IV. CLP Deliverable Report		Portland OR 97210		- Hydrocarbon Identification - Oregon HClD Run 8015 F&Q	
<input type="checkbox"/> V. EDD		<b>TURNAROUND REQUIREMENTS</b>		- O.I. & Grease - EPA Method 413.1	
		24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/>		- * Note Preservatives on Bottles	
		5 Day <input type="checkbox"/>			
		<input checked="" type="checkbox"/> Standard (10-15 working days)			
		<input checked="" type="checkbox"/> Provide FAX Results			
		Requested Report Date			
<b>RELINQUISHED BY:</b>		<b>RELINQUISHED BY:</b>		<b>RELINQUISHED BY:</b>	
Signature: J. Jakubik		Signature: J. Jakubik		Signature: _____	
Date/Time: 12/14/98 11:00		Date/Time: 12/14/98 10:00		Date/Time: _____	
Printed Name: Jim Jakubik		Printed Name: Jim Jakubik		Printed Name: _____	
Firm: SSP		Firm: SSP		Firm: _____	

SCHN00274705



## **ATTACHMENT 7**

SCHN00274706





May 15, 1997

Service Request No: K9703065

Tim Todd  
Schnitzer Steel Products Company  
P.O. Box 10047  
Portland, OR 97210

**Re: SSP**

Dear Tim:


Enclosed are the results of the sample(s) submitted to our laboratory on May 8, 1997. For your reference, these analyses have been assigned our service request number K9703065.

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions. My extension is 239.

Respectfully submitted,

**Columbia Analytical Services, Inc.**

  
Howard Boorse  
Project Chemist

HB/td

Page 1 of 6



## Acronyms

ASTM	American Society for Testing and Materials
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CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
J	Estimated concentration. The value is less than the method reporting limit, but greater than the method detection limit.
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
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NC	Not Calculated
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ND	Not Detected at or above the MRL
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

09002

SCHN00274708



**COLUMBIA ANALYTICAL SERVICES, INC.**

**Analytical Report**

**Client:** Schnitzer Steel Products Co.  
**Project:** SSP  
**Sample Matrix:** Solid

**Service Request:** K9703065  
**Date Collected:** 5/7/97  
**Date Received:** 5/8/97  
**Date Extracted:** NA  
**Date Analyzed:** 5/9/97

**Solids, Total**  
**EPA Method 160.3 Modified**  
**Units: Percent (%)**

<b>Sample Name</b>	<b>Lab Code</b>	<b>Result</b>
C1	K9703065-001	98.9

**Approved By:**  **Date:** 5/12/97 00003

1A/102094  
03065ICP.JC1 - TSolids 5/12/97

Page No.:

**SCHN00274709**



# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Schnitzer Steel Products Co.  
Project: SSP  
Sample Matrix: Solid

Service Request: K9703065  
Date Collected: 5/7/97  
Date Received: 5/8/97  
Date TCLP Performed: 5/12/97  
Date Extracted: 5/13/97

### Toxicity Characteristic Leaching Procedure (TCLP)

EPA Method 1311

#### Metals

Units: mg/L (ppm) in TCLP Extract

Sample Name: C1 Method Blank  
Lab Code: K9703065-001 K9703065-MB  
Date Analyzed: 5/13/97 5/13/97

Analyte	EPA Method	MRL	Regulatory Limit*		
Arsenic	3010A/6010A	0.1	5	ND	ND
Barium	3010A/6010A	0.5	100	1.0	ND
Cadmium	3010A/6010A	0.01	1	ND	ND
Chromium	3010A/6010A	0.01	5	0.33	ND
Lead	3010A/6010A	0.05	5	ND	ND
Mercury	7470A	0.001	0.2	ND	ND
Selenium	3010A/6010A	0.1	1	ND	ND
Silver	3010A/6010A	0.01	5	ND	ND

\* From 40 CFR Part 261, et al., and *Federal Register*, March 29, 1990 and June 29, 1990.

Approved By:                     

Date: 5/15/97

TCLP/102194

03065ICP.EA1 - Sample 5/15/97

00004

Page No.:

SCHN00274710



**COLUMBIA ANALYTICAL SERVICES, INC.**

**QA/QC Report**

**Client:** Schnitzer Steel Products Co.  
**Project:** SSP  
**Sample Matrix:** Solid

**Service Request:** K9703065  
**Date Collected:** 5/7/97  
**Date Received:** 5/8/97  
**Date TCLP Performed:** 5/12/97  
**Date Extracted:** 5/13/97  
**Date Analyzed:** 5/13/97

**Matrix Spike Summary**  
**Toxicity Characteristic Leaching Procedure (TCLP)**  
**EPA Method 1311**

**Metals**

Units: mg/L (ppm) in TCLP Extract

**Sample Name:** C1  
**Lab Code:** K9703065-001

<b>Analyte</b>	<b>Spike Level</b>	<b>Sample Result</b>	<b>Spiked Sample Result</b>	<b>Percent Recovery*</b>
Arsenic	5	ND	4.5	90
Barium	5	1.0	5.5	90
Cadmium	1	ND	0.84	84
Chromium	5	0.33	4.21	78
Lead	5	ND	4.28	86
Mercury	0.01	ND	0.011	110
Selenium	1	ND	1.0	100
Silver	1	ND	0.84	84

\* Percent recovery information is provided in order to assess the performance of the method on this matrix.

Approved By: \_\_\_\_\_

*EMA*

Date: \_\_\_\_\_

*5/15/97*

TCLP Method 1311 - Spike 5/15/97

**00005**

Page No.:

**SCHN00274711**



## CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 • FAX (360) 636-1068

DATE 5/7/97 PAGE 1 OF 1

[illegible]

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator

400-05

SCHN00274712



# SCHNITZER STEEL PRODUCTS CO.



19005 N. Burgard St. Portland, Oregon 97203  
xx 10047 Portland, Oregon 97210  
Phone 503/286-5771 FAX 503/286-6948

*W 558 Portland*

July 20, 1998

Mr. Samir Jiries  
Oregon Waste Systems, Inc.  
Columbia Ridge Landfill and Recycling Center  
18177 Cedar Springs Lane  
Arlington, OR 97812

Re: May 1998 Automobile Shredder Residue Laboratory Results

Dear Gary:

Samples of automobile shredder residue (ASR) produced at our Portland recycling facility were collected on May 13, 1998, consistent with the May 1995 sampling and analysis plan. The samples were transported under chain-of-custody to Columbia Analytical Services in Longview, Washington and analyzed for metals and polychlorinated biphenyls by U.S. Environmental Protection Agency methods 1311, 6010, 7470, and 8080.

ASR sample analytical data for the past 3 years are summarized on Table 1. Data for chromium, lead, and PCBs were statistically evaluated by methods described in the August 1993 U.S. Environmental Protection Agency scrap metal shredder sampling guidance document. A copy of laboratory report is attached.

Please contact me at (503) 286-6944 if you have questions.

Sincerely,  
Schnitzer Steel Industries, Inc.

*Timothy R. Todd*  
Timothy R. Todd  
Environmental Administrator

Attachments: Table 1  
Laboratory Reports

cc: *✓* Tom Zelenka



**Table 1**  
**ASR Sample Results**  
**Schnitzer Steel Industries, Inc.**  
**Portland, Oregon**  
**(mg/kg)**

Sample		USEPA Methods								
Number	Date	1311/6010/7470								8080
		As	Ba	Cd	Cr	Pb	Hg	Se	Ag	PCBs <sup>a</sup>
1	5/98	ND <sup>b</sup>	1.7	0.32	ND	0.42	ND	ND	ND	NA <sup>c</sup>
2		ND	1.4	1.06	0.06	0.54	ND	ND	ND	NA
3		ND	1.0	0.34	0.11	1.71	ND	ND	ND	NA
4		ND	1.2	0.25	ND	0.61	ND	ND	ND	NA
5		NA	NA	NA	NA	NA	NA	NA	NA	6
6		NA	NA	NA	NA	NA	NA	NA	NA	14
MRL <sup>d</sup>	0.1	0.50	0.01	0.05	0.05	0.001	0.0001	0.01	0.1 <sup>f</sup>	0.1
Average	0.1	1.55	0.19	0.05	1.69	0.001	0.0001	0.01	27.8	10
1	12/97	ND	0.9	0.14	0.04	1.53	ND	ND	ND	NA
2		ND	1.6	0.23	0.06	1.71	ND	ND	ND	NA
3		ND	2.34	0.14	0.04	1.48	ND	ND	ND	NA
4		ND	1.36	0.25	0.06	2.02	ND	ND	ND	NA
5		NA	NA	NA	NA	NA	NA	NA	NA	26.6
6		NA	NA	NA	NA	NA	NA	NA	NA	28.9
MRL		0.1	0.50	0.01	0.05	0.05	0.001	0.1	0.01	0.1
Average		0.1	1.55	0.19	0.05	1.69	0.001	0.1	0.01	27.8
1	8/97	NA	NA	NA	NA	NA	NA	NA	NA	57
2		NA	NA	NA	NA	NA	NA	NA	NA	25
3		ND	1.4	0.37	0.02	1.52	ND	ND	ND	NA
4		ND	1.4	0.24	0.02	0.92	ND	ND	ND	NA
5		ND	1.7	0.38	0.03	2.38	ND	ND	ND	NA
		ND	1.5	0.4	0.01	1.53	ND	ND	ND	NA
MRL		0.05	0.50	0.01	0.01	0.2	0.0001	0.1	0.01	0.1
Average		0.05	1.5	0.35	0.02	1.58	0.0001	0.1	0.01	41

SCHN00274714



**Table 1**  
**ASR Sample Results**  
**Schnitzer Steel Industries, Inc.**  
**Portland, Oregon**  
**(mg/kg)**

Sample		USEPA Methods								
Number	Date	1311/6010/7470								8080
		As	Ba	Cd	Cr	Pb	Hg	Se	Ag	PCBs <sup>a</sup>
1	1/97	ND	0.8	0.62	0.021	2.81	0.0005	ND	ND	NA
2		ND	1.1	0.47	0.038	1.93	0.0003	0.26	ND	NA
3		ND	1.1	0.65	ND	ND	0.0005	ND	ND	NA
4		ND	1.03	0.48	0.041	1.94	ND	ND	ND	NA
5		NA	NA	NA	NA	NA	NA	NA	NA	22.6
6		NA	NA	NA	NA	NA	NA	NA	NA	45.1
MRL		0.05	0.50	0.01	0.01	0.2	0.0002	0.25	0.01	16.0
Average		0.05	1.01	0.56	0.03	1.67	0.0002	0.26	0.01	33.85
ASR1	8/96	ND	1.5	0.40	0.066	1.7	ND	ND	ND	NA
ASR2		ND	1.7	0.53	0.025	0.54	ND	ND	ND	NA
ASR3		ND	1.4	0.57	0.030	1.1	ND	ND	ND	NA
ASR4		ND	1.7	0.59	0.024	0.98	ND	ND	ND	NA
ASR5		NA	NA	NA	NA	NA	NA	NA	NA	20
ASR6		NA	NA	NA	NA	NA	NA	NA	NA	24
MRL		0.50	0.50	0.01	0.01	0.20	0.0005	0.25	0.01	8.0
Average		0.50	1.6	0.52	0.036	1.08	0.0005	0.25	0.01	22
ASR1	2/96	ND	1.4	0.24	0.26	5.0	ND	ND	ND	NA
ASR2		ND	1.4	0.24	0.21	3.2	ND	ND	ND	NA
ASR3		ND	1.3	0.20	0.20	1.7	ND	ND	ND	NA
ASR4		ND	1.5	0.28	0.28	3.3	ND	ND	ND	NA
ASR5		NA	NA	NA	NA	NA	NA	NA	NA	ND
ASR6		NA	NA	NA	NA	NA	NA	NA	NA	ND
MRL		0.5	0.5	0.01	0.01	0.2	0.0002	0.25	0.1	5.0
Average		--	1.4	0.24	0.24	3.3	--	--	--	--
R#1	9/95	ND	1.2	0.2	0.18	1.6	ND	ND	ND	NA
ASR#2		ND	1.6	0.18	0.1	0.7	ND	ND	ND	NA
ASR#3		ND	1.2	0.37	0.07	1.6	ND	ND	ND	NA
ASR#4		ND	0.97	0.24	2.6	7.5	ND	ND	ND	NA

SCHN00274715



**Table 1**  
**ASR Sample Results**  
**Schnitzer Steel Industries, Inc.**  
**Portland, Oregon**  
**(mg/kg)**

Sample		USEPA Methods								
Number	Date	1311/6010/7470								8080
		As	Ba	Cd	Cr	Pb	Hg	Se	Ag	PCBs <sup>a</sup>
ASR#5		NA	NA	NA	NA	NA	NA	NA	NA	5.4
ASR#6		NA	NA	NA	NA	NA	NA	NA	NA	6.3
MRL		0.1	0.01	0.02	0.02	0.1	0.05	0.2	0.1	0.83
Average		--	1.2	0.25	0.75	2.9	--	--	--	5.9
ASR#1	3/95	ND	1.4	0.1	0.06	0.1	ND	ND	ND	33
MRL		0.1	0.04	0.01	0.02	0.1	0.05	0.2	0.1	NR <sup>b</sup>
ASR#1	2/95	NA	NA	0.37	NA	1.6	NA	NA	NA	NA
ASR#2		NA	NA	0.44	NA	2.5	NA	NA	NA	NA
ASR#3		NA	NA	0.52	NA	1.2	NA	NA	NA	NA
ASR#4		NA	NA	0.43	NA	2.2	NA	NA	NA	NA
ASR#5		NA	NA	0.33	NA	2.8	NA	NA	NA	NA
ASR#6		NA	NA	0.38	NA	2.0	NA	NA	NA	NA
ASR#7		NA	NA	0.33	NA	3.7	NA	NA	NA	NA
ASR#8		NA	NA	0.48	NA	2.9	NA	NA	NA	NA
MRL		--	--	0.02	--	0.1	--	--	--	--
Average		--	--	0.41	--	2.4	--	--	--	--
ASR#1	1/95	NA	NA	0.57	NA	0.7	NA	NA	NA	NA
ASR#2		NA	NA	0.5	NA	1.6	NA	NA	NA	NA
ASR#3		NA	NA	0.5	NA	0.9	NA	NA	NA	NA
ASR#4		NA	NA	0.6	NA	1.6	NA	NA	NA	NA
ASR#5		NA	NA	0.46	NA	0.7	NA	NA	NA	NA
ASR#6		NA	NA	0.64	NA	0.6	NA	NA	NA	NA
ASR#7		NA	NA	0.74	NA	0.9	NA	NA	NA	NA
ASR#8		NA	NA	0.5	NA	1.3	NA	NA	NA	NA
MRL		--	--	0.01	--	0.1	--	--	--	--
Average		--	--	0.56	--	1.0	--	--	--	--

SCHN00274716



**Table 1**  
**ASR Sample Results**  
**Schnitzer Steel Industries, Inc.**  
**Portland, Oregon**  
**(mg/kg)**

Sample		USEPA Methods								
Number	Date	1311/6010/7470								8080
		As	Ba	Cd	Cr	Pb	Hg	Se	Ag	PCBs <sup>a</sup>
ASR#1	12/94	ND	1.2	0.5	0.03	6.2	ND	ND	ND	25
ASR#2		ND	1.2	0.49	0.02	12	ND	ND	ND	12
ASR#3		ND	1.2	0.43	ND	3.8	ND	ND	ND	18
ASR#4		ND	1.2	0.36	ND	1.2	ND	ND	ND	19
ASR#5		ND	1.2	0.49	0.04	5.6	ND	ND	ND	16
ASR#6		ND	1.3	0.53	0.05	17	ND	ND	ND	19
ASR#7		ND	1.3	5.82	0.02	3.4	ND	ND	ND	15
ASR#8		ND	1.0	0.37	0.02	4.2	ND	ND	ND	19
MRL		0.1	0.01	0.02	0.02	0.1	0.05	0.2	0.1	3.0
Average		--	1.2	1.12	0.02	6.68	--	--	--	18
#1ASR	11/94	ND	0.19	0.48	ND	1.0	ND	ND	ND	20
#2ASR		ND	0.14	0.34	0.04	0.7	ND	ND	ND	14
#3ASR		ND	0.19	0.36	0.04	1.0	ND	ND	ND	17
#4ASR		ND	0.22	0.33	0.05	1.03	ND	ND	ND	13
MRL		0.1	0.01	0.02	0.02	0.1	0.05	0.2	0.1	3.0
Average		--	0.19	0.38	0.04	0.93	--	--	--	16
#1	8/94	ND	1.3	ND	ND	2.06	ND	ND	ND	17.4
#2		ND	1.14	0.12	ND	ND	ND	ND	ND	19.1
#3		ND	1.27	0.12	ND	0.64	ND	ND	ND	8.3
#4		ND	1.3	0.17	ND	ND	ND	ND	ND	7.7
#5		ND	1.37	0.12	ND	0.81	ND	ND	ND	9.4
#6		ND	1.39	0.13	ND	1.03	ND	ND	ND	9.5
#7		ND	1.44	0.13	ND	2.08	ND	ND	ND	ND
#8		ND	1.29	ND	ND	ND	ND	ND	ND	9.6

SCHN00274717



**Table 1**  
**ASR Sample Results**  
**Schnitzer Steel Industries, Inc.**  
**Portland, Oregon**  
**(mg/kg)**

Sample		USEPA Methods								
Number	Date	1311/6010/7470								8080
		As	Ba	Cd	Cr	Pb	Hg	Se	Ag	PCBs <sup>a</sup>
#9	8/94	ND	1.38	0.11	ND	2.16	ND	ND	ND	10.9
#10		ND	1.35	0.13	ND	1.25	ND	ND	ND	10.4
#11		ND	1.32	0.11	ND	1.12	ND	ND	ND	11.1
#12		ND	1.36	0.14	ND	1.61	ND	ND	ND	11.1
#13		ND	1.47	0.14	ND	1.95	ND	ND	ND	10.6
#14		ND	1.20	0.16	ND	1.71	ND	ND	ND	8.1
#15		ND	1.30	0.16	ND	0.97	ND	ND	ND	13.9
MRL		0.1	0.01	0.02	0.5	0.1	0.01	0.1	0.1	3.0
Average		--	1.33	0.13	--	1.26	--	--	--	11
SS-1	3/94	ND	1.03	0.37	ND	2.48	ND	ND	ND	ND
SS-3		--	--	0.33	--	1.76	--	--	--	ND
SS-9		--	--	0.15	--	1.07	--	--	--	10.6
MRL		0.1	0.01	0.02	0.5	0.1	0.01	0.1	0.1	5.0
Average		--	1.03	0.28	--	1.77	--	--	--	10.6
<b>OVERALL:</b>										
Average		--	--	0.34	--	1.87	--	--	--	13.29
Median		--	--	0.34	--	1.53	--	--	--	11.55
Variance		--	--	0.03	--	3.44	--	--	--	122.37
Standard Dev.		--	--	0.18	--	1.86	--	--	--	11.06
T-Value (CL)		--	--	2.01	--	2.01	--	--	--	2.05
T-Value (Hyp.)		--	--	1.68	--	1.68	--	--	--	1.70
LCL		--	--	0.29	--	1.43	--	--	--	9.90
UCL		--	--	0.38	--	2.31	--	--	--	16.74
Cut-off Value		--	--	1.04	--	5.36	--	--	--	52.21
TE: <sup>a</sup> PCBs are reported as the sum of all detected Aroclors. <sup>b</sup> ND - Not detected at or above the method reporting limit. <sup>c</sup> NA - Not analyzed. <sup>d</sup> MRL - Method reporting limit. <sup>e</sup> PCB MRL is for individual Aroclors; MRLs vary and are elevated due to matrix interference.										

SCHN00274718





May 28, 1998

Service Request No: K9803034

Tim Todd  
Schnitzer Steel Products Company  
P.O. Box 10047  
Portland, OR 97210

Re: SSP-ASR

Dear Tim:

Enclosed are the results of the sample(s) submitted to our laboratory on May 13, 1998. For your reference, these analyses have been assigned our service request number K9803034.

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions. My extension is 239.

Respectfully submitted,

Columbia Analytical Services, Inc.

Howard Boorse  
Project Chemist

HB/jcb

Page 1 of 8



## Acronyms

ASTM	American Society for Testing and Materials
AZLA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
J	Estimated concentration. The value is less than the method reporting limit, but greater than the method detection limit.
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected at or above the MRL
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

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SCHN00274720



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Schnitzer Steel Products Co.  
Project: SSP-ASR  
Sample Matrix: Solid

Service Request: K9803034  
Date Collected: 5/4/98  
Date Received: 5/13/98  
Date TCLP Performed: 5/19/98  
Date Extracted: 5/20/98

## Toxicity Characteristic Leaching Procedure (TCLP)

EPA Method 1311

## Metals

Units: mg/L (ppm) in TCLP Extract

Analyte	EPA Method	MRL	Regulatory Limit*	Sample Name:	1	2	3
				Lab Code:	K9803034-001	K9803034-002	K9803034-003
				Date Analyzed:	5/21/98	5/21/98	5/21/98
Arsenic	3010A/200.8	0.1	5	ND	ND	ND	
Barium	3010A/200.8	0.5	100	1.7	1.4	1.0	
Cadmium	3010A/200.8	0.01	1	0.32	1.06	0.34	
Chromium	3010A/200.8	0.01	5	ND	0.06	0.11	
Lead	3010A/200.8	0.01	5	0.42	0.54	1.71	
Mercury	7470A	0.001	0.2	ND	ND	ND	
Selenium	3010A/200.8	0.1	1	ND	ND	ND	
Silver	3010A/200.8	0.01	5	ND	ND	ND	

\* From 40 CFR Part 261, et al., and *Federal Register*, March 29, 1990 and June 29, 1990.

Approved By: \_\_\_\_\_

TCLP/102194

0304ICP.EA1 - Sample 5/26/98

Date: \_\_\_\_\_

5/26/98

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Page No.:

SCHN00274721



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Schnitzer Steel Products Co.  
Project: SSP-ASR  
Sample Matrix: Solid

Service Request: K9803034  
Date Collected: 5/4/98  
Date Received: 5/13/98  
Date TCLP Performed: 5/19/98  
Date Extracted: 5/20/98

## Toxicity Characteristic Leaching Procedure (TCLP)

EPA Method 1311

Metals

Units: mg/L (ppm) in TCLP Extract

Sample Name: 4  
Lab Code: K9803034-004  
Date Analyzed: 5/21/98

Method Blank  
K9803034-MB  
5/21/98

Analyte	EPA Method	MRL	Regulatory Limit*		
Arsenic	3010A/200.8	0.1	5	ND	ND
Barium	3010A/200.8	0.5	100	1.2	ND
Cadmium	3010A/200.8	0.01	1	0.25	ND
Chromium	3010A/200.8	0.01	5	ND	ND
Lead	3010A/200.8	0.01	5	0.61	ND
Mercury	7470A	0.001	0.2	ND	ND
Selenium	3010A/200.8	0.1	1	ND	ND
Silver	3010A/200.8	0.01	5	ND	ND

\* From 40 CFR Part 261, et al., and *Federal Register*, March 29, 1990 and June 29, 1990.

Approved By: \_\_\_\_\_

TCLP/102194

0310-TCLP.EAL - Sample (7) 5/26/98

Date: \_\_\_\_\_

5/26/98

00004  
Page No.

SCHN00274722



## COLUMBIA ANALYTICAL SERVICES, L.L.C.

## Analytical Report

Client: Schnitzer Steel Products Co.  
Project: SSP-ASR  
Sample Matrix: Solid

Service Request: K9803034  
Date Collected: 5/4/98  
Date Received: 5/13/98  
Date Extracted: 5/15/98

Polychlorinated Biphenyls (PCBs)  
EPA Methods 3540B/8080A  
Units: mg/Kg (ppm)  
As Received Basis

Sample Name:	5	6	Method Blank
Lab Code:	K9803034-005(D)	K9803034-006(D)	K980515-MB
Date Analyzed:	5/27/98	5/27/98	5/27/98

Analyte	MRL			
Aroclor 1016	0.1	<1	<1	ND
Aroclor 1221	0.1	<1	<1	ND
Aroclor 1232	0.1	<1	<1	ND
Aroclor 1242	0.1	6	14	ND
Aroclor 1248	0.1	<1	<1	ND
Aroclor 1254	0.1	<1	<1	ND
Aroclor 1260	0.1	<1	<1	ND

D

The MRL is elevated because of matrix interferences and because the sample required diluting.

Approved By: Date: 5/27/98

00005

K9803034

030345VGA.V1 - 1-MB 5/27/98

Page No.

SCHN00274723



## COLUMBIA ANALYTICAL SERVICES, L. C.

## QA/QC Report

Client: Schnitzer Steel Products Co.  
Project: SSP-ASR  
Sample Matrix: Solid

Service Request: K9803034  
Date Collected: 5/4/98  
Date Received: 5/13/98  
Date TCLP Performed: 5/19/98  
Date Extracted: 5/20/98  
Date Analyzed: 5/21/98

Matrix Spike Summary  
Toxicity Characteristic Leaching Procedure (TCLP)  
EPA Method 1311  
Metals  
Units: mg/L (ppm) in TCLP Extract

Sample Name: 4  
Lab Code: K9803034-004

Analyte	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery*
Arsenic	5	ND	5.8	116
Barium	5	1.2	6.7	110
Cadmium	1	0.25	1.17	92
Chromium	5	ND	5.48	110
Lead	5	0.61	5.67	101
Mercury	0.01	ND	0.01	100
Selenium	1	ND	1.2	120
Silver	1	ND	0.87	87

\* Percent recovery information is provided in order to assess the performance of the method on this matrix.

Approved By: \_\_\_\_\_

TCLP Method - Spike 5/26/98

Date: \_\_\_\_\_

5/26/98

00006

Page No:

SCHN00274724



COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Schnitzer Steel Products Co.  
Project: SSP-ASR  
Sample Matrix: Solid

Service Request: K9803034  
Date Collected: 5/4/98  
Date Received: 5/13/98  
Date Extracted: 5/15/98  
Date Analyzed: 5/27/98

Surrogate Recovery Summary  
Polychlorinated Biphenyls (PCBs)  
EPA Methods 3540B/8080A

Sample Name	Lab Code	Percent Recovery Decachlorobiphenyl
5	K9803034-005	77
6	K9803034-006	64
Method Blank	K980515-MB	84

CAS Acceptance Limits: 54-144

Approved By: 

Date: 5/27/98

00007

Page No.

SURL12829a

00045VGLAY1 - SURL 5/27/98

SCHN00274725





1317 South 13th Ave. • Kelso, WA 98828 • (360) 577-7222 • (800) 695-7222 • FAX (360) 636-1068

DATE 5/13/78 PAGE 1 OF 1

## CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

[illegible]

DISTRIBUTION: WHITE - INHABITANT; YELLOW - LATE - STAGE - CULTIVATED BY ANTI-SLAVE

SCHN00274726



**AGRA Earth & Environmental**

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Confidential Fax No. (503) 639-8846

E-Mail: agrapdx@agraus.com

TO: *Jim Talsbire / Tim Todd*

COMPANY:

*Schnitzer*

FAX NO.:

*299-2277*

SENDER:

*W Spang*

FAX OPERATOR:

HARD COPY TO FOLLOW:

*Yes*

FILE NO.

NO. OF PAGES:

*3*

(Including this page)

DATE:

*7/7/98*

SUBJECT:

*Please find enclosed letter regarding  
cost estimates for shredder.*

*Wesley Spang*

SCHN00274727



**AGRA Earth & Environmental**

ENGINEERING GLOBAL SOLUTIONS

July 7, 1998  
8-61M-09696-2

Mr. Jim Jakubiak  
Schnitzer Steel Industries, Inc.  
3200 NW Yeon Avenue  
P.O. Box 10047  
Portland, Oregon 97210

AGRA Earth &  
Environmental, Inc.  
7477 SW Tech Center Drive  
Portland, Oregon  
USA 97223-8025  
Tel (503) 639-3400  
Fax (503) 620-7882

Dear Mr. Jakubiak:

RE: GENERAL COST ESTIMATES  
SCHNITZER STEEL SHREDDER VIBRATION REMEDIATION  
PORTLAND, OREGON

This letter has been prepared to present general cost estimates for potential remediation schemes for the Schnitzer Steel Shredder in Portland, Oregon. AGRA Earth & Environmental, Inc. (AEE) prepared a previous report dated April 29, 1998 which presented the results of measurements and analysis of the vibrations within the Cargill Building, located southeast of the Schnitzer Steel Shredder at Terminal 4 in Portland, Oregon. Several potential remediation schemes were discussed in the referenced report to reduce existing vibration levels.

One method of reducing the existing vibration levels would involve the placement of a vibration control system beneath the shredder facility. We have discussed the use of a vibration control system with representatives of GERB Vibration Control Systems. Their firm manufactures a wide variety of springs and dampers to reduce vibrations from impact machinery such as forging hammers, presses, shredders, and other heavy equipment. Discussions with GERB representatives have indicated that six elements would be utilized for vibration isolation of the steel shredder. Four springs with damper units would be placed beneath the corners of the shredder assembly with two spring units being placed within the central area. The cost, as quoted by GERB, for the six springs and four dampers would be approximately \$22,000. Representatives of GERB indicated that a letter was sent to Schnitzer about June 3, 1998 presenting the above cost estimate. It is understood that Schnitzer personnel would install the springs and dampers beneath the shredder. It is recommended that a structural engineer be consulted to provide assistance in the evaluation of spring and damper locations to ensure appropriate structural support (GERB personnel may also be available for assistance).

The second option for vibration remediation would be to install a vibration barrier between the Cargill Building and the shredder. The barrier system would reflect a portion of the incoming vibrations, thus decreasing the energy and vibration level at the building. The barrier system could consist of driven steel sheet piles, auger cast concrete piles, concrete slurry wall, or other structural system. It is estimated that the barrier would need to have a length of approximately 200 feet and a depth of approximately 50 feet to be effective. It is estimated that the cost for a vibration barrier system would be on the order of \$200,000 to \$250,000.

SCHN00274728



Schnitzer Steel Industries, Inc.  
8-61M-09696-2  
July 7, 1998  
Page 2

A review of previous case histories published in the geotechnical engineering literature suggests that vibration barriers can reduce the vibration level by 30 to 50 percent.

The third option for mitigating the vibration level within the Cargill Building would be to modify the building. The modification would be similar to a seismic retrofit. Structural engineering analysis of the building would be required to design the elements needed for the retrofit. Structural modifications could include stiffening the building, increasing the damping characteristics, or both. Discussions with several structural engineers suggest that a general cost estimate for a modification to the building could be on the order of \$250,000 to \$300,000.

The first option, installing a vibration control system, has several advantages over the other two options. Placement of a vibration control system beneath the shredder reduces the vibration level at the source and is not dependent on an external system for vibration mitigation. This option also reduces the potential future problem of another building or structure being constructed that would also require vibration mitigation.

If you have any questions regarding this letter or desire further information, please contact the undersigned at your convenience.

Sincerely,

AGRA Earth & Environmental, Inc.

*A. Wesley Spang*  
A. Wesley Spang, Ph.D., P.E.  
Principal Geotechnical Engineer

AWS/lp

969621.wpd



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TOTAL P.03

SCHN00274729





*SSP Portland*

*file Portland IT*

**AGRA Earth & Environmental, Inc.**  
7477 SW Tech Center Drive  
Portland, Oregon  
USA 97223-8026  
Tel (503) 639-3400  
Fax (503) 620-7892

June 1, 1998  
8-81M-08688-1

Mr. Tim Todd  
Schnitzer Steel Industries, Inc.  
3200 NW Yeon Avenue  
P.O. Box 10047  
Portland, Oregon 97210

Post-it* Fax Note	7671	Date	# of pages <b>2</b>
To	<i>Tom Zelenka</i>	From	<i>Tim Todd</i>
Co./Dept.		Co.	
Phone #		Phone #	
Fax #		Fax #	

Dear Mr. Todd:

RE: SUMMARY OF VIBRATION STUDY  
SCHNITZER STEEL SHREDDER  
PORTLAND, OREGON

This letter has been prepared to summarize the measurements and findings of our previous report dated April 29, 1998. AGRA Earth & Environmental, Inc. (AEE) performed measurements and analysis of the vibrations within the Cargill Building, located southeast of the Schnitzer Steel Shredder at Terminal 4 in Portland, Oregon.

Vibration measurements were taken on the existing ground surface, first floor, and second floor of the Cargill Building. Measurements were taken during shredder operation and when the shredder was off. Analysis of the measured vibrations was performed in accordance with criteria developed by the International Organization For Standardization (ISO) to evaluate the vibration levels within the building with respect to levels recommended for suitable human tolerance within office environments.

Vibration levels within the Cargill Building, particularly the second story, are above the levels that have been established for office environments. The shredder operates at a frequency of approximately 10 Hertz and produces a continuous source of vibration into the ground during operation. The continuous vibrations of the shredder, in contrast to an impact or transient vibration source, results in higher levels of ground motion away from the shredder. Soil conditions at the site have a natural frequency of approximately 6 to 8 Hertz. This results in a relatively low decrease in the magnitude of ground vibrations away from the shredder facility. Another factor causing the elevated level of vibrations within the Cargill Building is the structural characteristics of the building. The design of the building, which incorporates tuck-under parking within the majority of the on-grade area, results in a structure more susceptible to vibration motion. The building would be more resistant to vibrations if the first floor contained walls around the entire perimeter. The walls would provide an increase in stiffness and would change the building's natural frequency (currently close to the predominant shredder vibration frequency). Detailed structural engineering analysis would be required to evaluate the magnitude of reduction in vibration levels that would occur with a fully enclosed first floor.



If you have any questions regarding this letter or desire further information, please contact the undersigned at your convenience.

Sincerely,

AGRA Earth & Environmental, Inc.

*A. Wesley Spang*

A. Wesley Spang, Ph.D., P.E.  
Principal Geotechnical Engineer



 **AGRA Earth & Environmental**  
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TOTAL P.03

SCHN00274731